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ABSTRACT

The monograph contains 24 papers, originally presented at a 1987 conference, on research and practice in the area of behavioral disorders of children and adolescents. Papers have the following titles and authors: "Psychiatric Diagnosis: A Further Test of the Special Education Eligibility Hypothesis" (Ellen McGinnis and Steven Forness); "Identification and Assessment of Behavioral Disorders: A State Perspective" (Gregory Williams and Norris Haring); "Classroom Conversion Kit: A Teacher's Guide to Teaching Social Competency" (Richard Neel); "Behaviorally Disordered, Learning Disabled, and Nonhandicapped Students' Social Status in Mainstream Classes" (Edward Sabornie et al.); "Treatment of Childhood and Adolescent Depression: Review and Recommendations" (John Maag); "Comprehensive Suicide Prevention" (Dennis Simon); "Differential Effects of Training in Two Classes of Social Initiations on the Positive Responses and Extended Interactions of Preschool-aged Autistic Children and Their Nonhandicapped Peers" (Sally Savelle and James Fox); "Facilitating Communicative Competence as a Basis for Developing Conventional Behaviors in Students with Autism and Severe Behavioral Disorders" (Anne Bauer et al.); "Handicapped Youth and Young Adults in Prison: Forgotten Clients in Search of Assistance" (Osa Coffey); "Selected Research Issues in the Education of Adolescents with Behavioral Disorders" (Michael Epstein and Douglas Cullinan); "Social Networks of Behaviorally Disordered Adolescents and Their Nonhandicapped Peers: A Preliminary Investigation" (Charles Barone et al.); "Factors in Intervention Choice" (Frank Wood); "Highlighting Analysis in Applied Behavior Analysis: Designing and Analyzing Single Subject Research" (Richard Shores); "The Promise and Pitfalls of an Ecological Perspective on Children's Behavioral Disorders" (Robert Gable et al.); "The Effects of Three Behavioral Interventions on the Disruptive Behavior of Behaviorally Disordered Students" (Mitchell Yell); "Stress and the Special Educator" (Charles Dedrick and Donna Raschke); "After 12 Years of Training Teachers, I Think I've Found a Way to Teach Teachers of the Emotionally Handicapped to Deal with Verbal Aggression" (Judy Olson). (DB)

Switzerland" (K. Weber); "Achieving an Optimal Balance Between General and Specialized Training in Higher Education" (Z. Levai); "The Problems Involved in Integrating General Education, Vocational Training, and Postgraduate Education into Lifelong Education" (A. Verbitsky); "An Empirical Approach to the Assessment of the Balance Between General Education, Vocational Training, and Further Training in Medical Curricula" (H. Dohn and J. Nystrup); "General Education, Professional Training, and Further Education in Teacher Education" (Z. Shechtman); "The Relationship Between General Secondary Education, Vocational Education, Specialized Secondary Education, and Higher Education in the Ukrainian Soviet Socialist Republic" (V. Pogrebnyak). A fourth section, Tribune, includes "Study Orientations of Austrian Students: Recent Trends" (P. Kellermann and G. Sagmeister); "The Doctor of Education Degree: A Harvest of Rapeseed and Ragweed" (G. P. O'Neill); and "Gifted Students in the Universities of the Slovak Socialist Republic" (S. Brychova). (SM)

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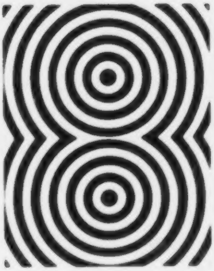

Severe Behavior Disorders of Children and Youth

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Preface

This volume of the *Monograph in Behavioral Disorders* series contains 24 papers dealing with research and practice in the area of behavioral disorders of children and adolescents. The papers, which were originally presented at the 11th Annual TECBD Conference in Tempe, Arizona in November 1987, deal with such topics as assessment and diagnosis, social skills and social competence, autism, depression and suicide, intervention, and teacher training.

Volume 11 of the TECBD *Monographs in Behavioral Disorders* marks the return of the series to publication by the Council for Children with Behavioral Disorders. Volumes 9 (*Severe Behavior Disorders of Children and Youth*) and 10 (*Bases of Severe Behavior Disorders of Children and Youth*) were published by College-Hill Press of Little, Brown and Company.

We would like to acknowledge the continued support of the CCBD Executive Committee in the publication of the monograph series. In addition, we wish to thank the Consulting Editors of *Behavioral Disorders*, who served as peer reviewers of the 40 papers originally submitted for consideration. The efforts of both these groups have been crucial to the success of the monograph series.

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Assessment and Diagnosis

Psychiatric Diagnosis: A Further Test of the Special Education Eligibility Hypothesis

Ellen McGinnis and Steve Forness

ABSTRACT

Given that several states continue to give serious consideration to use of psychiatric diagnosis as a criterion for admission to programs for the seriously emotionally disturbed in the public schools, a study was conducted of psychiatric diagnoses of children referred from a psychiatric hospital to public school programs. One group was returned to programs for the seriously emotionally disturbed and another to other programs, that is, learning disability and mental retardation programs or regular (non-special) education programs. Contrary to prediction, examination of psychiatric diagnostic categories in these two groups revealed that diagnoses normally considered exclusionary for such SED consideration characterized the former group and that those psychiatric diagnoses normally thought indicative of SED eligibility were more likely to be found in the latter group. Implications for further use of this eligibility by psychiatric diagnosis hypothesis are discussed.

Serious lack of special education services for children with emotional or behavioral disorders continues to be evident in that fewer than 1% of all schoolaged children are reported as being served in the category designated as seriously emotionally disturbed or SED (U.S. Department of Education, 1987). This is in marked contrast to much higher prevalence rates for serious emotional or behavioral disorders in schoolaged populations (National Mental Health Association, 1986). Review of prevalence figures, for example, in just *one* syndrome (i.e., childhood depression) suggests a range from 1.9 to 2.7% in children and from 1.3 to 18% in adolescents (Forness, 1988). Depressive features, furthermore, are just one of the current *five* criterion areas used to determine eligibility for SED programs under Public Law 94-142.

It is clear that a variety of systemic problems may account for such underrepresentaton, not the least of which involve difficulties in definitional and diagnostic criteria for SED eligibility in federal and state guidelines (Algozzine & Sherry, 1981; Council for Children with Behavioral Disorders, 1987; Forness, Sinclair, & Russell, 1984; McGinnis, Kiraly, & Smith, 1984; Paul, 1985; Wood, 1985). Criticisms of these guidelines involve their inherent vagueness as well as their irrelevance to public school programatic needs.

Such programs in determining eligibility for special education services under existing SED criteria have forced school personnel to look elsewhere for specific guidance about who is and who is not seriously emotionally disturbed.

One solution already proposed in California, Texas, and several other states is to borrow from another professional discipline — psychiatry (California Association for School Psychologists, 1984; Kelly, 1987; Slenkovich, 1983). In such schemes, each of the five SED eligibility areas would be linked to a list of supposedly corresponding psychiatric diagnoses in DSM III (American Psychiatric Association, 1980).

For example, a *pervasive mood of sadness or depression*, the fourth criterion area specified for SED eligibility in PL 94-142, would be determined by the fact that a child qualifies for a psychiatric diagnosis of unipolar affective disorder or dysthymia, as determined by DSM III criteria. Such proposals also invariably equate a psychiatric diagnosis of conduct disorder with *social maladjustment* and thereby consider such a diagnosis as *ineligible* for special education under SED criteria. It has apparently seemed manifestly logical to most policy makers that the extensive diagnostic information of DSM III, together with its recent revisions (American Psychiatric Association, 1987), would be a prime alternative to fill the gap left by vague or irrelevant federal criteria for determining school-based serious emotional disturbance.

Empirical evidence, however, suggests otherwise. Recent research suggests that psychiatric diagnoses, as determined by DSM III criteria, relate not at all well to school needs or classifications. For example, Forness and his colleagues (Barnes & Forness, 1982; Forness, Bennett & Tose, 1983; Forness, Sinclair, Alexson, Seraydarian, & Garza, 1985) were able to find no psychoeducational test differences among children with different psychiatric diagnoses in terms of scores on IQ, subtest scatter, or levels of underachievement in either reading or math. Sinclair and his colleagues (Alexson & Sinclair, 1986; Sinclair, Forness, & Alexson, 1985) were likewise unable to find differences among psychiatric diagnostic groups in terms of several levels of special education placement, from mainstreamed to completely segregated classrooms. This was even after development of a special grouping system designed to account for both primary and secondary psychiatric diagnoses of children (Sinclair & Alexson, 1985). In a thoughtful review of one such DSM III proposal, Center (1985) noted that several other serious errors and misassumptions characterize such DSM III approaches. Forness and Kavale (1987) have likewise pointed out that such a "calibration fantasy" borrowed from another discipline will not substitute for seriously needed revision of current federal SED criteria.

Such findings apparently have not as yet dissuaded public school policy makers from continuing to pursue such proposals, however (Council for Children with Behavioral Disorderss, 1987). Furthermore, negative empirical findings on the hypothesis linking psychiatric diagnosis to SED school eligibility have centered to date only on studies in one state — California. For this reason, it was felt necessary to examine this phenomenon further with other samples. In the following study, specific groups of SED and non-SED eligible children were examined to test the hypothesis that children with supposedly eligible psychiatric diagnoses under DSM III (e.g., schizophrenia, depression) tend to be found eligible for SED programs and that those with traditionally ineligible diagnoses (e.g., conduct disorders) tend to be placed in other, non-SED categories. A related question — which was also explored — involved change in restrictiveness of classroom placement as a result of psychiatric hospitalization, since the fact of hospitalization itself may tend to lead to more restrictive classroom placement and thus affect eligibility decisions independent of diagnosis (Forness & Barnes, 1981; Forness, Barnes, & Mordaunt, 1983).

METHOD

The sample for this study included 160 youngsters between the ages of 5 and 17 who were hospitalized in a psychiatric facility in the state of Iowa during a 15-month period of time. Length of hospitalization for this sample ranged from 3 to 121 days, with a mean of 34.3 days. Due to the large age range of the subjects, the sample was divided into the two groups of *younger* (ages 5 to 11) and *older* (ages 12 to 17). The age of 12 years appeared to be a logical age for division of the two groups, as most youngsters of this age begin to attend secondary school programs (middle schools or junior high schools). In addition, these two groups were further divided into SED and non-SED groups. The SED group consisted of those subjects who were recommended as seriously emotionally disturbed by the hospital teacher and recommended for special school programing on the basis of this disability. The non-SED group youngsters were recommended for either other special education services (i.e., learning disabled or mentally retarded, the latter including children below 85 IQ, according to Iowa criteria in effect at the time of the study) or were not found eligible for placement in special education programs.

Each youngster's hospital chart was reviewed to obtain demographic information (i.e., age, sex, IQ, pre-admission school placement, reason for referral to the hospital, and length of inpatient hospitalization). Additional informmation (i.e., reading achievement on standardized tests during hospital admission and postdischarge school placement recommendations) was obtained by review of educational reports which were also contained in the youngster's hospital chart. DSM III psychiatric diagnoses were made by qualified psychiatric house staff for each youngster and were likewise obtained from each hospital chart. Note that no formal consideration of psychiatric diagnosis was required for special education placement, according to Iowa procedures in effect at the time of the study. Thus eligibility decisions were made relatively independent of each youngster's psychiatric diagnosis. Table 1 presents a summary of the primary descriptive characteristics of the sample.

RESULTS

To determine whether educational placements may have changed simply as a result of psychiatric hospitalization, pre- and posthospital classroom place-

TABLE 1

Sample Characteristics

Total (N = 160)	**SED Eligible (N = 105)**		**Non-SED Eligible (N = 55)**	
	Younger (N = 81)	**Adolescent (N = 24)**	**Younger (N = 27)**	**Adolescent (N = 28)**
Male	72 (89%)	19 (79%)	17 (63%)	9 (32%)
Referred for school problem	76 (94%)	22 (92%)	17 (63%)	14 (50%)
Mainstreamed after discharge	9 (11%)	7 (29%)	17 (63%)	16 (57%)
IQ below 85	36 (44%)	5 (21%)	8 (30%)	7 (25%)

Note: Percentages rounded to nearest hundredth ments were analyzed. No change of placement occurred in 71% ($n = 114$) of the total subjects in this study, while 13% ($n = 20$) of the subjects were placed into less restrictive educational placements and 16% ($n = 26$) moved into more restrictive options. A chi-square test (for admission and postdischarge placements) was applied to the SED and Non-SED groups to assess the relationship among categories of less restrictive, more restrictive, and no change groups. This test was significant at $p < .001$ with 2 degrees of freedom, suggesting a relationship between membership in the SED or Non-SED group, and placement change. According to this analysis, 12% of the SED group were actually placed into less restrictive educational options while 24% went into more restrictive options (63% were unchanged). On the other hand, 13% of the Non-SED group were placed into less restrictive options; and nearly all of the remainder (86%) were unchanged.

Factors other than psychiatric hospitalization, however, which may have related to restrictiveness of educational placement, were also assessed. These factors included socioeconomic status, IQ, reading achievement, and length of hospitalization. There were no differences in the Non-SED group for any of these variables. Results of chi-square tests were likewise not significant for the SED group with one exception. Chi-square comparing reading achievement of the SED group with postdischarge placement was significant ($p < .01$, 4 df). As noted in Table 2, 75% ($n = 21$) of the lowest reading achievers were placed in segregated special classrooms. However, only 19% ($n = 8$) of the average or above-average readers were placed in regular class settings. These results suggest that for the SED group low reading achievement, and not psychiatric hospitalization per se, was related to more restrictive educational placement.

TABLE 2

Postdischarge Classroom Frequency by Reading Level for SED-Eligible Group (N = 93)

Achievement	Regular Class	Partial Mainstream	Segregated	Total
Average or above	8	18	16	42
One year below	1	12	10	23
More than a year below	0	7	21	28

To assess relationships between psychiatric diagnosis and SED membership, the DSM III diagnoses represented by this sample were combined into the same categories developed by Sinclair and Alexson (1985). As noted in Table 3, more than half of the SED group, but less than one-third of the Non-SED group, received conduct-related diagnoses. The Non-SED group more often received a diagnosis of Affective Disorder while only a small percentage of the SED group received such a diagnosis. Proportionately more subjects in the SED group received a diagnosis of Mental Retardation. Additionally, several of the SED group were diagnosed with Autistic Spectrum Disorder whille none of the Non-SED group received this diagnosis. Of the Non-SED group, 18% (7% younger and 21% adolescent) received a diagnosis of Somatic Disorder while none of the SED group received such a diagnosis.

TABLE 3

Frequency of Psychiatric DRGs by Eligibility (N = 160)

Diagnostic-Related Group	SED Eligible Younger (N = 77)	SED Eligible Adolescent (N = 24)	Non-SED Eligible Younger (N = 26)	Non-SED Eligible Adolescent (N = 26)
Attention	4 (5%)	0 (0%)	2 (7%)	0 (0%)
Conduct	47 (59%)	12 (50%)	8 (29%)	6 (21%)
Somatic	0 (0%)	0 (0%)	2 (7%)	6 (21%)
Affective	1 (1%)	3 (12%)	7 (26%)	9 (32%)
Personality	3 (4%)	2 (8%)	0 (0%)	0 (0%)
Psychotic	0 (0%)	2 (8%)	0 (0%)	1 (4%)
Autistic	11 (14%)	4 (17%)	0 (0%)	0 (0%)
MR	11 (14%)	1 (4%)	7 (26%)	4 (14%)

Note: Percentages rounded to nearest hundredth, and 4% of sample had no diagnosis

To assess the effectiveness of DSM III in discriminating between the SED and Non-SED groups, it was necessary to further collapse the DRGs into three major diagnostic-related groups (DRGs) of Conduct Disorders, Mental Retardation, and Other (the remaining psychiatric diagnostic groups), as shown in Table 4.

TABLE 4

Percentage of Eligibility by Collapsed DRGs

Collapsed DRG	SED Eligible	Non-SED Eligible
Conduct	81	19
Other	31	69
MR	73	27

Note: Percentages rounded to nearest hundredth

Chi-square comparing the total SED group to the Non-SED group for these three DRGs was significant ($p < .0001$, 2 df), suggesting a relationship between these categories of DSM III diagnoses and SED or Non-SED eligibility. As shown in Table 4, 81% ($n = 60$) of the Conduct group were recommended as SED while 69% ($n = 20$) of the Other group were considered noneligible.

DISCUSSION

A significantly higher proportion of SED youngsters changed educational programs as compared to the Non-SED group. These placement changes for the SED group were characteristically more restrictive, but significant relationships between a youngster's low reading achievement and the level of restrictiveness of postdischarge placement were also found. That low readers were more frequently recommended for and placed into more restrictive educational options than average readers should be expected for other special education categories but is relatively surprising for students whose primary disability is a behavioral or emotional one. Such a finding, however, tends to replicate the work of Sinclair, Forness, and Alexson (1985) who also found that psychiatric DRGs with associated learning disability diagnoses were more likely to be SED eligible. These results are also consistent with the findings of Alexson and Sinclair (1986) who demonstrated that inpatients tended to be recommended to more restrictive placement options following hospital discharge. It is important to note this as one limitation of the current study in that these youngsters may have arguably been more impaired than typical SED youngsters in public schools.

Results of this investigation regarding DSM III diagnoses suggest that such diagnoses do appear to relate to special education programing for SED youngsters. However, this relationship is in direct *contradiction* to the efforts of some school districts currently attempting to exclude children with a diagnosis of Conduct Disorders from eligibility for SED services. In this study, the majority of emotionally or behaviorally disordered youngsters did receive a conduct-related diagnosis while the NON-SED group members were more frequently diagnosed as having Affective Disorders, Somatic Disorders, and Mental Retardation. As in the Sinclair, Forness, and Alexson (1985) study, there were also a number of children with Psychotic Disorders who did *not* qualify as seriously emotionally disturbed. Furthermore, inclusion of a group of acting-out, aggressive youngsters in the category of SED is consistent with the wealth of such documentation available in the literature (Graham & Rutter, 1973; Hale, 1978; Hewett & Jenkins, 1945; Patterson, 1964; Peterson, 1961; Quay, 1979; Quay, Morse, & Cutter, 1966; Von Isser, Quay, & Love, 1980).

There are, of course, limitations to the current study, as have characterized previous research, in that only one psychiatric hospital was involved in one state. This growing body of evidence nonetheless continues to suggest not only the problematic nature of exclusionary criteria in the federal definition of SED that attempts to eliminate children with social maladjustment from eligibility in this category, but also the hazards of equating social maladjustment with conduct disorders (Council for Children with Behavioral Disorders, 1987). The most salient feature of the current study is perhaps that its results are so dramatically contrary to selected state proposals seeking to exclude conduct disordered children from SED eligibility.

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Identification and Assessment of Behavioral Disorders: A State Perspective

Gregory John Williams and Norris G. Haring

ABSTRACT

The state of Washington undertook a 2-year investigation of the adequacy of identification and service delivery to the behaviorally disordered population. A variety of school personnel were queried as to the quality as well as the quantity of services to this population. Consistent with other investigations nationally, results suggest that this population is underserved, inadequately served, and underidentified. In addition, a pilot screening instrument was developed and trial tested. This screening instrument (Systematic Screening for Behavioral Disorders) holds promise for future systematic efforts to help children at risk for later identification as behaviorally disordered.

Over the years, it has been noted that children with severe behavioral disorders (SBD) have not been adequately served by the public school systems. Unfortunately, this state of affairs has not changed significantly (Grosenick & Huntze, 1980, 1983; Haring, Jewell, Lehning, Williams, & White, 1987; Noel, 1982). A variety of studies contribute to the conclusion that "the public schools do not have either a strong history or adequate record in serving this population of children" (Walker, Reavis, Rhode, & Jensen, 1985, p. 3). That history has, for many years, been one of exclusion, separation, and lack of services. In the past, serving children with behavioral disabilities was seen as the responsibility of mental health professionals rather than educators. Treatment involved removal of the child from the school setting, whether for short-term therapies or long-term placement in special schools and institutions.

Nationally, the number of school-sponsored programs increased throughout the 1960s and 1970s and continued to grow after passage of Public Law 94-142, the Education for All Handicapped Children Act. Although federal law mandates that the public schools provide these students with an appropriate education, a variety of studies have shown that large numbers of students with severe behavioral disabilities are not receiving the services they need. As a result, the U.S. Department of Special Education and Rehabilitative Services declared behavioral disabilities to be a top priority for investigation. From all indications, however, large numbers of children remain unserved, and those services which do exist are neither consistent nor systematic.

The Sixth Annual Report to Congress on Implementation of PL 94-142: The Education for All Handicapped Children Act (U.S. Department of Education, 1984) revealed that segregated special classes are still the most common program option and that 58% of all severe behaviorally disordered students continue to be placed in restrictive programs as compared to 32% of the total

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handicapped student population. An estimated 741,000 students nationwide are still in need of behavior-related special education services but do not receive them; and many existing programs are inappropriate or of poor quality due to the lack of adequately trained staff (Grosenick & Huntze, 1980, 1983). At both the state and the federal levels, it has become an educational priority to identify the reasons for this lack of adequate service delivery, and to develop and implement adequate solutions.

Information that has accumulated over the past few years provides an interesting comparison to the state of affairs in Washington. The number of children with serious behavioral disabilities reported by all the states has increased by 25% nationwide from 1976 to 1983 (U.S. Department of Education, 1984). Nationally, it is estimated that 2 to 12% of children and youth ages 3 to 21 should receive special education and related services because of behavioral disorders (Grosenick & Huntze, 1980). However, the percentage of these students actually being served as handicapped during 1982-1983 was only .89% (U.S. Department of Education, 1984). Given these estimates, seriously behaviorally disordered students appear to be an underserved population.

At least in part, this can be seen as a function of inadequate guidelines for procedures in the classification and determination of eligibility for this population. Some states provide detailed, extensive information to provide support and assistance to those responsible for the classification of behaviorally disordered students. This is not the case in many states, however (cf. Wood, Smith, & Grimes, 1985). In fact, criteria for determination of eligibility can differ from state to state, district to district, and within districts (Haring, Jewell, Lehning, & Williams, 1987; Waksman & Jones, 1985). Suffice to say that there is a serious lack of data, both qualitative and quantitative, that is used to determine eligibility of behaviorally disordered students for special education (McGinnis, Kiraly, & Smith, 1984; Smith, Frank, & Snider, 1984).

The question of the adequacy of service delivery to the behaviorally disordered population is problematic as well. Upon reviewing the current status of program development and service delivery, Kauffman (1985) concluded that it can be characterized best as one of "confusion, disorder, diversity, inadequacy" (p. 263). Data provided by Grosenick (1986) substantiates this description. She notes that, among other findings, (a) only one-third of the programs used formal program evaluation procedures; (b) regular education personnel were seldom involved in developing program goals or providing inservice training on matters pertaining to the program; (c) only one-half of the programs had established a written philosophy describing where, why, and how services were to be provided; and (d) only half of the programs had formalized criteria and procedures governing student exit from programs. Noel (1982) stated it succinctly when she noted that there was too much haphazard program development for the behaviorally disordered population. In order to facilitate coherence in programing for this population, she recommended a systemwide service plan that is based on empirically proven procedures for this population.

Overview of Activities in the State of Washington

The problems that the state of Washington experiences in this regard are very similar. In contrast to the national figures which indicate that more behaviorally disordered children are being served, during the same period the state of Washington reported a decrease of 33% in this population. In addition, Washington currently is providing special education services to .5% (or 3,400 students) of the total K-12 population (730,776) under the severe behavioral disorders category, substantially less than nationally. Incoherence in service delivery is also a typical complaint of school district personnel. In response, the Washington Council of Administrators of Special Education (WCASE) and the Washington Association of School Administrators (WASA) voiced a variety of concerns to the state Office of the Superintendent of Public Instruction (OSPI) that were related to the education of severe behaviorally disordered students in the state of Washington. Both WCASE and WASA stressed that the failure of our schools to adequately identify and serve the severe behaviorally disordered population is an issue of pressing local, state, and national importance. Their statements were based on the concerns of administrators, teachers, parents, and state legislators. The issues involve students with serious behavioral disabilities/disorders, and the variety of problems that are compounded by such disabilities (e.g., academic failure, high drop-out rates, expulsions, suspensions, classroom discipline, and lawbreaking). These problems continue to plague our schools.

In response to the suggestions of WCASE and WASA and nationally identified concerns, the Office of the Superintendent of Public Instruction provided grant support to the University of Washington and the Highline School District to conduct a study of statewide identification and service delivery to children and youth with serious behavioral disabilities. The project guidelines from OSPI included a request for the following information: a general description of the problem, investigating the assumption that these students are unserved or underserved, a description of the current state-of-the-art and emerging technology for identifying and managing this population, and the adequacy of service delivery within the state. In order to accomplish the charge, a Task Force comprised of many educators, state personnel, parents, and others was assembled, and project staff members were selected. A number of activities were then commenced which were designed to gather the needed information.

METHOD

Questionnaires

Questionnaires were constructed and sent to educators serving students with serious behavioral disabilities around the state. An initial needs questionnaire was mailed to every school district in the state which reported offering services to these students; it was designed to provide general data on needs, priorities, opinions, and concerns. Based on responses to this survey, additional questionnaires were constructed to collect more detailed information: one for administrators, one for special education teachers, one for regular education teachers, and one for assessment personnel.

The administrators' questionnaire covered the topics of state and federal laws and definitions, assessment strategies, program offerings, relations with nonschool agencies, theoretical approaches, needs of students with mild/moderate behavioral disabilities, inservice training priorities, and model practices. The special education teachers' questionnaire addressed student population served, support services, curricula and materials used, assessment and evaluation procedures, intervention strategies, inservice training needs, model practices, and suggested improvements. The assessment personnel questionnaire was identical to the administrators' questionnaire except for six additional questions which were suggested by assessment personnel on the Task Force. The fourth questionnaire was sent to regular education personnel. This questionnaire was to a great extent similar to that completed by special education teachers.

Interviews

Questionnaire data were supplemented by conducting interviews with administrators, school psychologists, social workers, counselors, and others. Project staff also reviewed randomly selected files of the severe behaviorally disordered during on-site visits to 15 school districts. In addition, 24 agencies or programs in the state of Washington that served these children and youth made presentations to and were reviewed by the project staff and the project Task Force.

Program Reviews

Project staff reviewed exemplary programs in other states, selecting Colorado, Georgia, Idaho, Iowa, Utah, and Vermont as states with comprehensive service delivery systems for this population. Staff then visited those sites and gathered information from them about their efforts to address the needs of the serious behavioral disabilities population.

Pilot Study — The Multiple Gating Approach

As a result of concerns regarding lack of an organizing framework for assessment and determination of eligibility, the SBD Task Force implemented a pilot study of a multiple gate screening procedure for use with the severe behaviorally disordered population. It had become apparent to the Task Force that the development of a way in which an entire school population could be screened for behavioral disorders would be optimal. This screening procedure would obviate many of the problems associated with the current referral process, and might result in early identification and subsequent intervention with children exhibiting significant behavior problems.

A prototype screening procedure, based upon the work of Loeber, Dishion, and Patterson (1984) was subsequently developed by Walker, Severson, and Haring (1985). This screening-identification procedure, titled Systematic Screening for Behavioral Disorders (SSBD), consists of three separate but interrelated stages and is known as a *multiple gating* device in that it contains a series of progressively more expensive and precise assessments, or *gates*.

The first gate involves teachers' systematic evaluation of all children in their classes through a rank ordering procedure. All students are ranked along two dimensions — externalizing and internalizing behavioral disorders. The top three ranked students for each dimension are selected for further evaluation in Gate II. At this stage, those six students who pass through Gate I are assessed in terms of quantity and quality of behavior through the use of, respectively, a behavioral rating scale (combined frequency index — CFI) and a behavioral checklist (critical events index — CEI). Rated pupils who exceed normative criteria at this point are then passed through this second gate and are at Gate III, observed in the classroom and on the playground through the use of systematic observational procedures (see Figure 1).

For this pilot project, the prototype screening procedure was developed and implemented in several school districts in the state of Washington by SBD Task

Force project staff, as well as in the state of Oregon by Hill Walker and his associates. Specifically, issues of interrater reliability, test-retest stability, and concurrent validity were investigated.

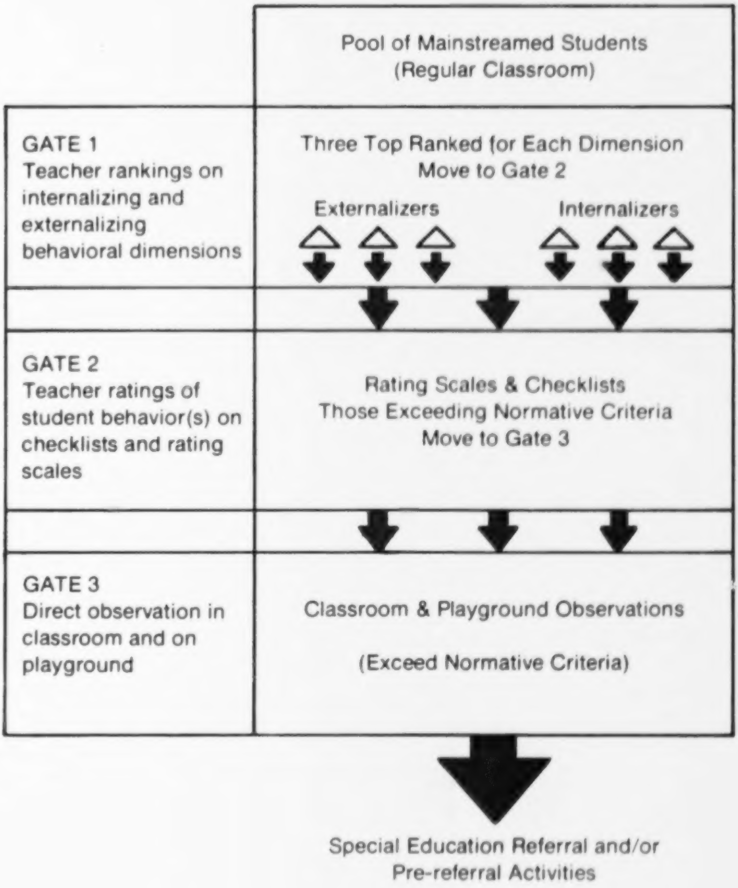
Pool of Mainstreamed Students
(Regular Classroom)
GATE 1
Teacher rankings on internalizing and externalizing behavioral dimensions
Three Top Ranked for Each Dimension
Move to Gate 2
Externalizers
Internalizers
GATE 2
Teacher ratings of student behavior(s) on checklists and rating scales
Rating Scales & Checklists
Those Exceeding Normative Criteria
Move to Gate 3
GATE 3
Direct observation in classroom and on playground
Classroom & Playground Observations
(Exceed Normative Criteria)
Special Education Referral and/or
Pre-referral Activities

Figure 1. *Multiple gate screening procedure*

RESULTS

Questionnaires, Interviews, Site Visits

Analysis of responses to the questionnaires, interviews with school district personnel, and the site visits revealed several areas of need. In particular, problems with the assessment and identification process were noted across all sources of data analyzed. These results correspond with the findings of similar studies at the national level (Smith, 1985; Smith, Frank, & Snider, 1984): A need for agreement in regard to identification and eligibility criteria for students with serious behavioral disabilities, and a need to develop and implement a statewide comprehensive assessment procedure. In particular, the results of the assessment personnel questionnaire and the site visits shed light on these problems. With regard to the assessment of the seriously behaviorally disabled student utilizing formal assessment instruments, school psychologists in the state continue to advocate the use of personality/projective instruments in the identification process.

Specific tests that were noted in a perusal of files of the seriously behaviorally disordered across the state were the Draw a Person (DAP), House-Tree-Person (HTP), Minnesota Multiphasic Personality Inventory (MMPI), Thematic Apperception Test (TAT), Sentence Completion, and even the Rorschach. Standardized behavioral rating scales and checklists were noted in less than 20% of the files reviewed. In addition, in less than 10% of the files reviewed were standardized observational procedures utilized; almost without exception, classroom observations were anecdotal in nature — there were no attempts at quantification of observed behaviors. Tests of academic achievement and intellectual functioning were also advocated: the Wide Range Achievement Test (WRAT; Jastak & Jastak, 1965), Woodcock Johnson Psychoeducational Battery (Woodcock & Johnson, 1977), the Peabody Individual Achievement Test (PIAT; Dunn & Markwardt, 1970), and the KeyMath (Connolly, Nachtman, & Pritchett, 1971, 1976) were commonly seen.

In all districts reviewed, it was discovered that systematic screening procedures for use with the seriously behaviorally disabled population were not utilized. In those districts, screening is synonymous with teacher referral, and relies upon teacher anecdotal accounts of problematic student behaviors in the classroom. This practice explains the finding that, across the state, more than 80% of the seriously behaviorally disabled student population is made up of those children and youth who exhibit problems of an acting-out, externalizing nature. Children whose problems are of an internalizing, withdrawn nature make up slightly less than 20% of the population. Findings also revealed that the determination of a student's eligibility for services was not consistent from district to district. While all districts used multidisciplinary teams (MDTs), eligibility depends primarily upon the perspective of the school psychologist who undertakes a child's screening or assessment, using whatever instrument seems, to her/him, to be appropriate. As a consequence, determination of eligibility is idiosyncratic to each district, and even to each multidisciplinary team within that district.

Pilot Study — Multiple Gate Screening

Interrater reliability. Stage I ranking procedures were trial tested in 15 classrooms that involved team teaching or teacher-aide instructional situations. Problems were encountered initially in achieving adequate correlations for the internalizing rank ordering procedure. These problems were not apparent for the rank ordering procedure for externalizing problems. In the final set of trial tests, interrater correlations were achieved across both internalizing and externalizing behavioral dimensions of between .89 and .94 (see Table 1).

Test-retest stability. Test-retest stability coefficients were obtained for 2-, 3-, and 4-week time intervals. For Stage I, correlations ranged between .74 and .83 (Rho). The stability of Stage II was also assessed, and the test-retest r obtained for 69 elementary pupils rated by their teachers (*N* = 17) was .88 for adaptive items and .83 for maladaptive items (See Table 1).

Concurrent validity. Results of the pilot study indicated that, of the teachers who completed the screening procedure, an already certified seriously behaviorally disabled student was ranked in the top 3 on either the externalizing or internalizing dimension 90% of the time. These results suggest that the SSBD is sensitive to pupils who have already been identified as seriously behaviorally disabled through the usual school district assessment procedures. In addition, Stage II rating instruments were completed for not only those 10 already identified severe behaviorally disabled students, but for 6 randomly selected normal students as well. Table 1 contains means, ranges, and standard deviations on these Stage II data. Given that this is a small sample, these results suggest that Stage II instruments may discriminate between seriously behaviorally disabled and normal children.

TABLE 1

Means, Standard Deviations, and Ranges for Normal and Behaviorally Disordered Elementary-Aged Pupils on the SSBD Stage Two Instruments

	Critical Events Index (CEI)					
	Externalizing Index			**Internalizing Index**		
	Mean	**SD**	**Range**	**Mean**	**SD**	**Range**
Normal	.83	.93	0-2	1.0	1.09	0-2
SBD pupils	4.6	1.73	2-7	.90	3.0	0-9

	Combined Frequency Index (CFI) for Externalizing and Internalizing Behavioral Dimensions					
	Adaptive Behavior			**Maladaptive Behavior**		
	Mean	**SD**	**Range**	**Mean**	**SD**	**Range**
Normals	43.8	6.36	34-51	19.8	5.84	13-27
Behaviorally disordered pupils	26.9	7.34	20-42	38.6	5.56	30-45

These preliminary results of the pilot study were reviewed by project staff and Task Force members, and investigations into the feasibility of this screening procedure are continuing (Walker, Severson, & Haring, 1985; Walker, Severson, Haring, & Williams, 1986; Walker et al., in press).

DISCUSSION

It is apparent after reviewing literature with a national focus and also viewing the data collected and reported by the State of Washington SBD Task Force that serious problems exist in providing adequate special education services to the severe behaviorally disabled population. There are, of course, limitations to any study which addresses what people know, believe, feel, or want. For this particular project a standardized questionnaire was presented to several groups of respondents. For each group, the same questionnaire was presented to all respondents. Across the groups of respondents slightly different questionnaires were designed — attempting to measure the perceptions of salient issues concerning severe behaviorally disabled children and youth by each group.

A limitation with the use of questionnaires is the type of questions presented. Ambiguity, double-negatives, and so forth can cloud data gleaned from these responses. Project staff utilized rigidly standardized, fixed alternative, and open-ended questions to best ascertain valid responses across all respondent groupings.

Another limitation of the study could be the initial low return rate of, in particular, the assessment personnel questionnaire (39%). Project staff addressed this problem by probing a group of nonrespondents from those districts with especially low return rates. This second sampling confirmed those trends established in the initial sampling. In addition, even though the percentage of questionnaires was low, 25% of all school psychologists in the state of Washington were represented.

Generally speaking, validity of results can be questioned given concerns about sampling procedures, subjects sampled, construction of questionnaires, and so forth. Project staff addressed these concerns by sampling perceptions across different groups of individuals all of whom are involved in education for children and youth with behavioral disorders. By assessing these different groups with similar instruments, a striking degree of consistency was obtained in responses. This lends credence to the identification of trends established not only for respondents from one group, but across groups as well. This consistency of responding indicates that the same problems concerning children and youth with behavioral disorders are perceived by different groups of people, substantiating validity of the assessment methodology.

It is apparent after a view of accumulated data reported by the State of Washington SBD Task Force that serious problems exist in providing adequate special education services to the severe behaviorally disabled population. When one views the comprehensive management process (screening and identification, assessment, determination of eligibility, program placement, curricula, and instruction), it can be seen that deficiencies exist all along the continuum.

In particular, the Task Force pointed to deficiencies in the assessment process; for example, it was shown that there exists a lack of a systematic means for screening all of the children in school districts across the state for behavioral disorders. The Task Force, across all of its information gathering activities, did not find one example of a school district implementing districtwide or even schoolwide procedures to accomplish this. As a result, screening is synonymous with teacher referral. The vagaries of relying upon teacher referral are many; teacher expertise and tolerance serve to generate many false positives as well as false negatives. It is no surprise, therefore, to find that in Washington, 80% of the children currently identified as severely behaviorally disordered have problems of an externalizing, acting-out nature. Those children who are socially withdrawn, or internalizing, make up less than 20% of the state seriously behaviorally disabled population.

It is also apparent that significant changes in the procedures and instruments used in the assessment process must take place. It is with particular dismay that we view the findings that in approximately 80% of the files reviewed there continued to be a reliance upon personality and projective instruments. Correspondingly, in only 20% was there evidence that standardized, norm-referenced behavioral rating scales and checklists are being used. The implications of these data are profound. It reveals that the criteria used to determine eligibility for special services vary from one school district, multidisciplinary team, and one school psychologist to the next because of the nature of the assessment instruments and procedures in use.

Task Force activities also corroborated the work of Smith (1985) in that most school psychologists and multidisciplinary teams rely on intellectual and academic assessments and projective measurements while not utilizing other valid and reliable assessment strategies (i.e., those concerned with obtaining relevant information about behavioral functioning) which would have value in program planning by teachers and other service providers. Of particular import was the lack of evidence that systematic observational procedures (e.g., time interval, time-sample, behavioral frequency counts) are being used in determination of eligibility.

It seems obvious, given the findings of the present study, that multidisciplinary teams are not using the full range of reliable and valid assessment strategies that exist (McGinnis, Kiraly, & Smith, 1984; Smith, 1985; Walker et al., in press), and therefore may not be obtaining all of the relevant data that teachers consider useful for purposes of programing. For instance, Task Force project staff interviewed numerous teachers over the course of the 2 years of this project. Most teachers of the seriously behaviorally disordered emphasized behavioral strategies in the classroom that relied upon measurable behavioral outcomes. There was an emphasis, at the classroom level, on behavioral counts, rating scales, and checklists in evaluating student behavior(s) and progress toward IEP goals.

Particularly troubling, then, is the seeming discrepancy between assessment and evaluation procedures used in the classroom and those used in the identification and determination of eligibility process as conducted by the school psychologists. Students are caught in a Catch 22, if you will. They are placed into special education based upon the results of, shall we say an HTP, and anecdotal reports of two 15-minute classroom observations, anecdotal regular education teacher reports, the results of the WRAT, and a WISC-R. Once in a program, their growth/progress is measured by frequency counts, token economies, progress toward specific behavioral objectives, and scores on checklists and rating scales. When it comes time to reevaluate their placement, however, and the original tests are given, little attention is paid to progress on in-class measures. Is it any wonder that so few students, once identified as behaviorally disordered and placed, ever leave special education?

In most regards, it seems the state of affairs in Washington are not unlike those in many other states. The State has taken an important first step by assembling the Task Force that has accomplished this information gathering activity, and subsequently generated a set of specific recommendations.

As a result of this 2-year investigation of educational practices for the seriously behaviorally disordered population, and the encouraging results obtained from the pilot study on systematic screening of school populations for children at risk for later identification as behaviorally disordered, the Office of the Superintendent of Public Instruction of the state of Washington was presented with several recommendations relative to assessment, identification, and determination of eligibility for special education services, as follows:

1. OSPI should, with the cooperation of local education agencies, determine

the feasibility and appropriateness of the use of a valid, reliable, screening device as well as appropriate assessment procedures, and support their application in schools. In pursuing an investigation of appropriate procedures, special attention should be directed to the following issues: (a) a comparison of the previously investigated multiple gating procedure with other established screening instruments or approaches in terms of validity, reliability, cost effectiveness, and time effectiveness; (b) the degree to which the multiple gating screening procedure succeeds in identifying both externalizing and internalizing students; and (c) an investigation of those factors that may influence screening reliability and validity.

2. The state of Washington should assist LEAs in developing a technical assistance manual with annotated samples of current practices for assessment personnel throughout the state. There should be an emphasis on procedures that meet technical standards in terms of validity and reliability.

3. Guidelines for assessment should be developed that emphasize measurable behavioral outcomes to be readily converted by teachers and other service providers into educational practices.

4. The state of Washington should ensure that (a) assessment procedures are consistent across and within school districts; (b) these assessment procedures relate directly to the establishment of goals and objectives for each individual student; and (c) the instruments used in the assessment process appropriately differentiate severe behaviorally disordered students from other "hard to place" youth.

These recommendations, however, need not be limited only to the state of Washington. Certainly, if all states were to cooperatively address the problem of the "severe behaviorally disordered" through such comprehensive changes in program development, we would be one step closer to adequate services for this population. The challenge to the nation, as well as to the state of Washington, is to go forward and implement these recommendations in a timely manner.

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8

Social Skills and Social Competence

Classroom Conversion Kit: A Teacher's Guide to Teaching Social Competency

Richard S Neel

There are several conceptualizations of behavioral disorders in the literature (Algozzine, Schmid, & Mercer, 1981; Clarizio & McCoy, 1983; Kauffman, 1985; Morse, 1985). Each has its own view of impact, causes, and interventions. The merit of each theoretical position as a useful tool for planning programs has been discussed for over 50 years. No consensus has emerged. Additional analysis of the positions would lend little to solving the dilemmas you face every day. As a teacher, you are faced with a myriad of external and internal demands. Professions of what you should do, why you should do it, and what will happen if you do not comply, abound. The purpose of this paper is not to add to this liturgy, but to focus on ways to help children with social problems. Presented is a classroom conversion kit. Conversion implies change — change in the way you look at children with behavior problems, and change in how you structure your classrooms.

The Perspective of Access

One way that children could be grouped is according to their abilities to access rewards within the school setting. Some children lack the ability to access a majority of the rewards available at school. Children with autism are a stunning example. They frequently attend school settings, yet fail to interact with others in ways that make them an integral part of the school program. Even with instruction, they often access limited numbers of social functions (Donnellan & Neel, 1986).

Other children access some of the social rewards but may not talk as much as other children. They may be less schooled in the art of chit-chat that goes on between peers and teachers. A child in our neighborhood school, for example, seems not to have mastered the answer to "What did you do last weekend?"

Still others fail in academic pursuits. They may be either low in the academic abilities that are so highly prized in schools or they may have other problems that interfere with how they perform.

A fourth group is comprised of those who seem to access rewards of school in ways that are not desired by adults and many children. Examples include class clowns, children who tattle or whine, and of course, children who are intimidating and aggressive. These children often command a great deal of attention and are successful in achieving their ends, but we still don't feel right about how they behave.

There are also children who don't seem to desire what schools have to offer. They seek access to rewards that violate the values of the majority. They often talk of revenge, punishment, and harm as goals of their behavior. Some of them are suicidal, others abuse drugs and alcohol.

None of these groups of children is exclusive or clearly defines a specific population. They are not intended as a new classification system to replace DSM III. Nor are they intended as a partial listing of children who are labeled behaviorally disordered. Instead, they are examples that illustrate the wide variety of children who are not receiving what they are seeking from schools. Schools respond by keeping the rewards that it will dispense (grades, promises of adult adjustment, absence of punishment for those who comply) fixed. Programs are set up that try to "fix" the child's behavior and change the rewards they value. Access to rewards are limited to paths carefully prescribed by the system. To date, such techniques have not worked very well.

How We Got Here

To understand what needs to be changed, a brief history of services for children with behavioral disorders is in order. The first response to children with problems was to set up separate *special* classes. These classes were highly structured with a clear set of rules and consequences. Behavior problems were viewed as errors — something to eliminate. Most classes were academically oriented. Instruction was made individual with the addition of folders, multiple dittos, short assignments, and lots of feedback. Management systems designed to correct behavior were devised. Instruction, both academic and social, gave way to correction. Little attention was given to teaching the specific skills. Success was an increase in academic performance and the absence of undesired behaviors in *artificial, highly structured classrooms.* The requirements of these utopian classes were far different from those of classes for nonhandicapped children. Progress did not generalize outside the training settings.

Another difficulty was the assumption that correction of problem behaviors was good instruction. To understand the problem, examine the differences between academic instruction and correction techniques. Correction begins at the start of an incident. Academic instruction, however, is a planned event. Take reading, for example. In a reading lesson, who schedules the time of instruction, selects the material, makes the presentation, looks for responses, and then provides correction? The teacher does. When a behavior problem occurs, who schedules it, provides the materials, evaluates the response, and decides if the incident need go on? The student does. Who, then, is doing the learning? I contend that the reason that behavior problems are so difficult is that they place the teacher in the role of student, a role that s/he is not used to and often finds uncomfortable. As long as instruction of social competency remained solely a correction technique, these problems prevailed.

Social Skills Instruction: Now Let's Have a Group

As educators became aware of the limitations of the correction model to solve social problems, they turned to social skills instruction. Unfortunately, they repeated the errors of the past. The pull-out model for providing the instruction was instituted. Now a plethora of social skills groups are in schools across the country. We teach social skills in isolated settings like speech pathologists used to teach language and communication. We have translated the instructional design errors of other disciplines into our own with similar results. As Gresham (1986) has noted, there is little evidence that indicates we have done anything to improve the abilities of children with handicaps to function more effectively in nonspecial settings.

Another problem with our current treatment of social skills instruction is our lack of attention to what needs to be taught. Many of the social skills programs focus on compliance behaviors pleasing to adults. Skills are taught as generic ones, easily transferable from situation to situation. Social relevance of the behavior chosen is ignored (Dodge, 1985). The lack of attention of the differences between social behavior and social skills (Gresham, 1986) and our complete disregard of the interaction between social tasks and required behaviors (Dodge, 1985) has promulgated a series of curricula that teach behaviors rather than remediate social competency.

A fundamental belief that accounts, in part, for these problems in teaching children with behavior problems is that the regular school program is fixed and changes have to be made in the child alone. Walker and Fabre (1987) suggest two alternate approaches. First, that persons and environments can be matched to provide optimal opportunities for growth, development, and adjustment. Second, that the behavior of individuals and the structure of environments can be modified to facilitate achievement of a satisfactory person-environment fit (Romer & Heller, 1983; Schalock, 1985). It is in the spirit of making such changes that the "Classroom Conversion Kit" is presented.

CLASSROOM CONVERSION KIT

The following steps will help you convert your classroom to one that will foster the social development and adjustment of all the children you teach.

Step 1: Find Some Energy

Most teachers work at their level of efficiency after the first year or so of teaching. If you are going to make any changes you will have to find ways to gain energy. There are several places you might look. Here are a few suggestions to get you started.

Throw away any uncorrected homework that is more than 3 days old. It is too long between the activity and the feedback. You will not lose any formative evaluative data in the short run since the next assignment has already been given, and you can select another paper, graded nearer the time it was completed, to use for summative evaluations.

Another example of ways to gain energy is to make up a recorded set of spelling tests. You can do it by turning part of a faculty meeting into "read the words into the tape" day. In 10 or 15 minutes, with enough recorders, you can do a whole semester's set of tests. This will free you from reading the practice test on Wednesday and the final one on Friday.

More examples can be generated by you and the other teachers in the building. Generate a list, and then select one or two that fits your style.

Step 2: Set Up a Place for Children to Work Together

Most of our classes are designed to minimize interaction. This is especially true in special education settings where individual folders are the norm. Rearrange the class to increase the need for, and likelihood of, interaction. Put different children in charge of different sets of supplies and services. Make more work tables where there are less structures to limit interaction.

Change the physical structure before you change the activities. We often make both changes at the same time and this can be too much to handle. Make physical changes first; then introduce new programs.

Step 3: Each Week, Have a Social Goal in Mind for Each Child

Each child should have a weekly social goal to work toward. These goals should be public, and responsibility for achieving them should be shared whenever possible. Class meetings, group contingencies, (Litow & Pumeroy, 1975), and similar techniques can be used. Advocacy systems where children are supported and given direct feedback are good ways to develop a working set of goals.

Having social goals helps you remain focused on the importance of social development and highlights the problem areas that require more instruction. This enables you to branch away from the more traditional management systems that focus primarily on correction rather than instruction.

Step 4: Have a Model to Use When Planning What to Teach

There are several models of instruction that can be used in your classroom (see Goldstein, Sprafkin, Gershaw, & Klein, 1980, and Shure & Spivak, 1979, for examples). I have advocated in the past for teaching children competencies that will increase access to various rewards available in schools (Neel, 1986). The use of functional social skills will enhance interactions of children with peers and teachers (Neel, 1984). Too much of our current instruction is focused upon the pleasing of teachers. We need to increase our focus on teaching peers how to get along in purposeful ways.

Step 5: Choose a Curriculum to Follow

It is unlikely that there is one set of materials that will meet the needs of all children. You will need to develop a set of objectives, choose your materials, design your teaching strategies, and then evaluate your results. You cannot expect to be successful if you choose a set of materials and use that as your "curriculum".

It is very difficult to teach using traditional techniques and still have time for social competency instruction. An integrated model for teaching social and academic content is probably the most promising (see Slavin, 1983, for a review). Cooperative group activities will increase the number of social interactions and will provide opportunities for integrating social instruction into more natural contexts. Additionally, it will enable you to teach a variety of skills within various social situations. As Ladd (1985) and Dodge (1985) suggest, attending to how required skills change as situations change is a critical element in planning social skills instruction.

Increased socialization has to be the major goal of social skills instruction. We will have to teach functional skills, those that directly lead to desired social goals, if we are to be effective (Neel, 1984). The focus should be on skills that enhance social competency as they are being learned. Skills that have only temporary utility or limited future promise should be avoided.

Step 6: A Method for Measuring Progress and Making Changes

When you teach social skills you will need to measure what skills your children have learned, how well they apply those skills to various social situations, and how successful they are in affecting their social goals. Measuring these changes in social skills is difficult. Usually teacher judgments or role plays are used to assess student learning. These measures, however, do not adequately address the complexities of social competence. Recent findings have brought their use into question (Dodge, 1985; Jenkins, 1987; Krasnor, 1985). The use of hypothetical/reflective reports, role plays, and self-reports alone has also been seriously questioned (Gresham, 1981; Gresham & Elliot, 1984; Jenkins, 1987; Neel, 1987). A more comprehensive measuring system needs to be employed.

No comprehensive system currently exists. Krasnor (1985) suggests measuring sequences of behavioral interactions between peers using video tapes. Dodge (1985) includes sequences and identification of social tasks in his measurement system. Walker, Todis, Holmes, and Horton (1988) include measurements of the skills, the valence (positive or negative) of the skill, and the relevance of the behavior chosen as critical elements in assessing social behaviors.

Until a more articulated system is developed, you will have to design one of your own. You can measure skill acquisition through modified role plays (Dodge, 1983). Set up situations where you teach the required skill. Then set up analogue situations in another setting and watch how well your student does in the situation. What you want to discover is whether your student has learned the new skills with enough fluency that s/he feels comfortable to try them in a novel situation.

Social impact can also be measured in the same exercise. Here you are looking for a sequence of social skills across more than one setting. After a child has demonstrated a skill in one of the staged situations, then determine how successfully s/he applies this same skill to other situations. Notice if s/he modifies the skill to reflect differences in situations and reactions of others in the group.

The ultimate test of social competency, of course, is how well a person does socially. To measure this you will have to determine the desired social goals of several situations and then test whether or not your student is reaching these goals in ways that are acceptable to others in the environment. Be especially careful to note adaptations in behavior based upon how others respond. More than any other single skill, it is the child's ability to notice his/her effect on others and to modify his/her actions accordingly that probably predicts social success.

Step 7: Develop Management Programs That Reflect Your Goals

Often we treat the way we manage children separately from how we teach them. We set up programs for teaching social skills, with lots of opportunities for interactions, and then set up a management system that prevents any use of these skills. It is difficult, if not impossible, to have children interact, argue, discuss, negotiate, and compromise if the class is set up so they get points only for completing their tasks, sitting quietly in their seat, and only talking when they raise their hand. Similarly, it is hard to create the need for solving problems, asking for help, or making do with what you have when all the assignments are put in folders, materials are readily available, and the teacher stands ready to eliminate all road blocks. It is necessary to design a management system that not only controls behaviors but also provides for opportunities to practice new skills.

Step 8: Develop an Implementation Plan for You to Use

Planned changes are the easiest to implement. If any of the above steps appeal to you, develop a plan for implementing them. Do not try to make all the changes at once. You, too, need time to learn new skills. If you have never run a group nor designed a cooperative academic lesson, then start there. If you have limited experience in designing a managment program that will offer opportunities for practicing social skills and yet not create chaos, then start there. Be kind to yourself. Start slowly and try to insure success. Teaching is too hard a job to set expectations that are too far outside your experience level. Develop a plan, talk it over with friends and colleagues, and then make a start. It is the starting that is the critical element of converting your classroom.

One final note. Change your mind set every once in a while. It is an essential element in teaching to engage in activities that cause you to look at the ordinary in extraordinary ways. Some suggestions on how to do that include reading outside your field, volunteering for something you have never done before, traveling, taking up a hobby, meeting new people, selling used cars, buying used cars, planting trees in someone else's garden, eating in a restaurant that serves no foods you can pronounce, studying quantum physics and mathematics, digging fossils, repairing your motorcycle. There are, of course, an infinite list of choices. The real message is: choose one.

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Behaviorally Disordered, Learning Disabled, and Nonhandicapped Students' Social Status in Mainstream Classes

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ABSTRACT

This study investigated the regular classroom sociometric status of elementary level behaviorally disordered, learning disabled, and nonhandicapped students. In the three groups, 63 subjects were matched on several demographic and educationally relevant variables, and a rating scale sociometric instrument was administered to the subjects and other students who were enrolled in 21 physical education classes. Results indicated that pupils in the three samples did not differ significantly in how they rated their peers, but certain comparison groups differed in sociometric status received from their classmates. In addition, the three samples and their classmates did not differ significantly in reciprocal acceptance, tolerance, and rejection. Conclusions are drawn with regard to similarities and differences of behaviorally disordered versus learning disabled students and the need for adequate social relationship interventions.

Students with behavioral disorders (BD) and those with learning disabilities (LD) have long been known to experience difficulties in social and affective domains. Specifically, some of the social/affective traits that these pupils share include (a) poor social acceptance or high levels of social rejection among their peers in regular classes (Perlmutter, Crocker, Cordray, & Garstecki, 1983; Ray, 1985; Sabornie & Kauffman, 1985); (b) adjustment difficulties (i.e., social-emotional and personal function; Cullinan & Epstein, 1985); (c) personality problems (Cullinan, Epstein, & Dembinski, 1979); and (d) low self-esteem (Jones, 1985). In conjunction with academic underachievement, which is also typical of behaviorally disordered and learning disabled (or mildly handicapped) pupils, it appears that their social sphere inadequacies are truly problematic. Moreover, if special educators are to be maximally effective they must be cognizant of the social deficiencies that are typical of certain mildly handicapped students, and they must remediate deficient social skills in students

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The data presented here originate from the same set as those collected in Sabornie (1987). The behaviorally disordered and nonhandicapped subjects used in the present study, however, along with the classrooms from which data were collected, are not the same as those used in the earlier Sabornie published work. Three of the six elementary schools used for data collection in the present investigation, and two of the three school districts used here, were also used in Sabornie (1987). The behaviorally disordered versus learning disabled versus nonhandicapped comparison design of the present study, in other words, was preplanned not to include subjects from Sabornie (1987).

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with the same level of serious effort that is typical of academic skill remediation (Sabornie, 1987).

Some noteworthy differences, however, exist between behaviorally disordered and learning disabled students. Cullinan and Epstein (1985; see also Cullinan et al., 1979), for example, showed that behaviorally disordered students had significantly higher levels of conduct disorders in comparison to learning disabled pupils. Cullinan, Gadow, and Epstein (1987) found that behaviorally disordered students were perceived by their teachers as significantly more hyperactive than comparison learning disabled pupils. Morgan (1986) demonstrated that behaviorally disordered students did not evince as great an internal locus of control as did learning disabled cohorts. Mooney and Algozzine (1978) showed that behaviors characteristic of behaviorally disordered children were more disturbing than those of learning disabled peers, and Gajar (1980) found that behaviorally disordered and learning disabled students differed significantly on academic performance measures and degree of scatter on achievement tests. Lastly, Sabornie, Kauffman, Ellis, Marshall, and Elksnin (1987-1988) showed that behaviorally disordered adolescents, when compared to learning disabled matched peers, received significantly less social acceptance in mainstream classrooms. Perhaps the statements of Hallahan and Kauffman (1976, 1977), in which the authors concluded that behaviorally disordered and learning disabled students (and those labeled educably mentally retarded — EMR) are more similar than different, need a contemporary reexamination in light of the differences that have been documented in research.

With the exception of the Sabornie et al. (1987-1988) study cited above, the extant empirical literature is scant with regard to regular classroom social status similarities and differences across behaviorally disordered and learning disabled groups. Ray (1985) examined social status of behaviorally disordered, learning disabled, and educably mentally retarded pupils, but their received acceptance or rejection was not separated by category of exceptionality. Sabornie et al. (1987-1988) also uncovered new information concerning not only how nonhandicapped (NH) students in traditional classes accept or reject mildly handicapped students, but also how behaviorally disordered and learning disordered adolescents *perceive their nonhandicapped classmates*. Their findings showed that although behaviorally disordered students differed from learning disabled pupils in how their peers accepted them in regular classes (i.e., behaviorally disordered subjects were less accepted), the two groups did not differ significantly in their degree of acceptance, tolerance, familiarity, or rejection assigned to their nonhandicapped peers.

In other words, behaviorally disordered students were not well accepted *by* their classmates but were nevertheless accepting *of* them. Sabornie et al. (1987-1988) also found that IQ and social rejection received by the behaviorally disordered and learning disabled students were significantly correlated in a positive direction. The findings reported by Sabornie et al. deserve special scrutiny and replication not only in light of the new information offered regarding the social milieu of behaviorally disordered and learning disabled students, but also because of the recent trend to group these pupils in the same cross-categorical, special education setting. Considering the findings of the Sabornie et al. study, it can therefore be tentatively stated that some behaviorally disordered youth, in comparison to others labeled learning disabled, may need more comprehensive assistance in improving their social integration among their nonhandicapped peers in mainstream classes.

Rationale for the present study can also be found in Hartup, Glazer, and Charlesworth (1967). This seminal work, involving nonhandicapped pupils and sociometric status, found that social acceptance and rejection were not correlated to a great degree. These findings led Hartup et al. and others (e.g., Asher & Taylor, 1981; Hops & Lewin, 1984; Sabornie & Ellis, 1987) to conclude that acceptance and rejection are not poles of the same continuum but comprise two independent constructs. The Hartup et al. (1967) findings were also used as justification in research for separate analyses involving sociometric acceptance and rejection data (e.g., Sabornie, 1987; Sabornie & Kauffman, 1987; Sabornie et al., 1987-1988). At present, however, no research has examined whether acceptance and rejection form two disparate continua of sociometric status with behaviorally disordered and learning disabled students.

The major purpose of the present study was an attempt at replication of the Sabornie et al. (1987-1988) investigation. Similar to the previous research, the present study examined the received (i.e., when peers rated the target subjects) and assigned (i.e., when the subjects rated their classmates) social acceptance, tolerance, and rejection of matched behaviorally disordered, learning disabled, and nonhandicapped pupils. The present and earlier works are similar across dimensions of (a) approximate number and type of subjects used for examination, (b) matching variables used to control for extraneous subject differences, (c) type of sociometric method used, (d) regular classroom setting used to assess sociometric status, (e) data treatment and statistical procedures performed, and (f) research questions asked. The present and earlier investigation are different in that elementary level behaviorally disordered, learning disabled, and nonhandicapped subjects were used here, whereas high school subjects were used in the previous study. Elementary level, mildly handicapped subjects were used in this replication to determine whether the same patterns of assigned and received social status existed with a different age group. Additional justification for the present study can be found in Sabornie et al. (1987-1988).

The major research question addressed in the present study was: Do behaviorally disordered, learning disabled, and nonhandicapped elementary students differ in assigned and received sociometric acceptance, tolerance, and rejection in regular classrooms? Another research question included: Do behaviorally disordered, learning disabled, and nonhandicapped students assign social status to their peers in the same way that their classmates rate them? Lastly, an additional question was related to the correlates of sociometric status with the mildly handicapped samples: Do social acceptance and rejection form distinct continua when behaviorally disordered and learning disabled students are examined?

METHOD

Subjects and Setting

Comparison group subjects included 63 pupils in grades three, four, and six. These students attended 21 regular physical education (PE) classes in six elementary schools of three adjacent suburban school districts in central South Carolina. School districts selected for data collection had behaviorally disordered and learning disabled students attending regular classrooms for portions of the school day with varying amounts of time spent by individual pupils in categorical resource rooms.

Nonhandicapped students chosen as subjects were those in attendance in the classes where sociometric data were collected. They had not been identified as handicapped and received their instruction entirely in traditional elementary level classes. The nonhandicapped comparison group was comprised of 21 subjects.

Behaviorally disordered students were school-identified by State Department of Education definitional criteria (i.e., identical criteria to that of Public Law 94-142). The behaviorally disordered comparison group had 21 students as members.

Learning disabled students were also school-identified by State Department of Education and PL 94-142 definitional criteria, and totaled 21 subjects.

Subject matching. In order to control for some of the extraneous subject effects that could interact with the dependent variable (i.e., sociometric status), and because random assignment to the mildly handicapped samples was not possible, students in the three groups of interest were matched on several variables. Behaviorally disordered, learning disabled, and nonhandicapped subjects were matched to each other on (a) race (2 blacks and 19 whites in each group); (b) sex (3 females and 18 males in each group); (c) grade level (6 students in 3rd grade, 11 in 4th grade, and 4 in 6th grade in each group); (d) socioeconomic status (i.e., eligibility for free or reduced price lunch; 1 on reduced fee lunch and 20 on regular fee lunch in each group); (e) familiarity among their classmates (see below); (f) WISC-R full-scale IQ (for behaviorally disordered and learning disabled groups only — see below); and (g) number of years in special education (for behaviorally disordered and learning disabled groups only — see below).

Familiarity among classmates was used as a group matching variable in light of the fact that it lies outside the realm of social acceptance, tolerance, and rejection, and because how well someone is known can affect how they are perceived (Sabornie, 1985; Sabornie & Ellis, 1987). Subjects' familiarity of their peers was measured by using the *question mark* category of the How I Feel Toward Others (HIFTO; Agard, Veldman, Kaufman, & Semmel, 1978; see also Instrumentation section below). One of the sociometric categories of the HIFTO, a question mark inside a circle, is used to rate classmates whom the respondent does not know well. Each subject's percentage of total ratings received from their peers in the question mark category (the dependent variable in this case) was converted via an arc sine transformation, and these transformed data were subsequently used in a one-way analysis of variance of familiarity across the comparison groups. The behaviorally disordered (M = .53, SD = .36), learning disabled (M = .42, SD = .34), and nonhandicapped (M = .46, SD = .31) subjects did not differ significantly in familiarity among their classmates ($F[2,60]$ = .59, ns).

The behaviorally disordered and learning disabled subjects' full-scale IQs were used as a dependent variable to determine whether their group means differed across the two mildly handicapped conditions. The behaviorally disordered (M = 102.38, SD = 12.73) and learning disabled (M = 100.86, SD = 9.69) group IQs did not differ significantly, correlated $t(20)$ = .52, ns. Because individual IQ scores were available for only those referred for special education purposes and none of the nonhandicapped matched subjects was ever referred, IQ could not be used as a matching variable with the nonhandicapped sample.

Number of years in special education was another matching variable that was used only for the mildly handicapped samples. Each behaviorally disordered and learning disabled subject's length of time (in number of years) since first placed in special education was used as a dependent variable to determine whether the two groups differed significantly. Behaviorally disordered (*M* = 2.76 years, *SD* = 1.22 years) and learning disabled (*M* = 2.66 years, *SD* = 1.11 years) matched subjects did not differ significantly in length of time identified for special education purposes, correlated $t(20) = .70$, ns.

Physical education classes were the chosen site for data collection because all students, including those identified as mildly handicapped, were required by state law to participate satisfactorily in these nonacademic classes at least once per week. The 21 matched triads were chosen immediately after data collection and after class attendance and student demographic variables were available for inspection. Eliminated for inclusion in the selected samples were 7 additional behaviorally disordered and 4 learning disabled pupils because they could not be matched exactly to subjects in other comparison groups. In every selected PE class at least 55 nonhandicapped students could be matched to the behaviorally disordered and learning disabled cohorts. In such cases, nonhandicapped matched subjects were randomly selected from the 5 who met the matching criteria.

Each of the regular PE classes chosen for data collection had behaviorally disordered, learning disabled, and nonhandicapped subjects on the same class roster. Subjects therefore were rated by and assigned ratings to common classmates. Sociometric ratings were obtained on 498 students (out of a possible 568, or 86% of the available student population) listed on the 21 class rosters whose parents granted written, informed consent for their child's participation. Of these 498 students enrolled in the selected classes, 63 were members of the three comparison samples. The remainder of the unmatched nonhandicapped population in the PE classes ($n = 424$) served as other survey respondents and as the center of reference when the matched triads assigned and received sociometric ratings.

Instrumentation

The HIFTO was used to obtain sociometric status data in the PE classes. This instrument is a four-category, forced choice rating scale in which respondents judge their classmates by using faces that depict different types of social status. A circle (or open face) with a question mark inside denotes unfamiliarity with a class member who is listed on a roster. A smiling face is interpreted as those with whom the respondent is a friend (i.e., acceptance criteria). A straight mouth face is used to assign tolerance or neutrality) toward a classmate, and a frown face denotes dislike (or rejection) of a peer. Five examples with animals and descriptive paragraphs are used to help respondents understand the meaning of each rating category.

The HIFTO, designed specifically for use with elementary level mildly handicapped groups, has been used in other recent sociometric studies involving exceptional students in regular classes (e.g., Coben & Zigmond, 1986; Sabornie, 1987). The HIFTO's test-retest reliability is adequate ($r = .80$ for acceptance, and .56 to .80 for rejection), and interrater consistency ranges from .70 to .91 for all four rating categories. Lastly, this instrument is also appropriate with regard to content validity (see Agard et al., 1978).

Procedures

Classroom sociometric data were collected during February through April of 1986. Sociometric survey administration was conducted with a total of 493 students (99%) enrolled in the 21 PE classes. Student participation in each elementary school approached 100% in that survey administration was performed on subsequent days to any pupil who was absent on a previous data collection day. After their entire PE class was surveyed, 40 students (8%) received survey administration, usually 2 to 3 students at a time.

Data were collected by the primary investigator or a trained graduate research assistant. Participants were first told to find their own name on the 2-page HIFTO roster and "cross it out" (i.e., they were not to rate themselves). The survey administrator then read aloud the directions for survey participation along with the practice examples and the names of all students (i.e., one at a time, several times) listed on the roster. Large pictures of the four HIFTO rating categories and their meaning were also displayed prominently while the pupils were completing the questionnaire. After each student's name was read aloud from the class list, respondents were told to mark in pencil an "X" on one and only one of the four rating faces following that person's name.

The survey administrator and cooperating PE teachers walked through the class to ensure that all students were completing their ratings satisfactorily. From those received by members of the nonhandicapped sample, 11 individual ratings (2.5%) were missing; 3 ratings (< 1%) received by the behaviorally disordered group and 4 ratings (< 1%) obtained on the learning disabled sample were similarly not included. Also eliminated because individuals assigned more than one rating or did not assign any rating to a classmate were 16 student ratings (3.2%) assigned by the behaviorally disordered sample, 11 choices (2.2%) by the learning disabled subjects, and 12 choices (2.4%) given by the nonhandicapped comparison group.

Data were treated in the following manner. Ratings were coded so the sociometric choices that the matched triads gave to their peers (i.e., assigned status) as well as the judgments that their peers gave to them (i.e., received status) could be determined. In other words, each subject's total number of ratings were separated into the six categories of assigned and received acceptance, tolerance, and rejection. Their percentage of total ratings assigned and received in the six status components were then calculated. To control for varying class size and statistical nuances of rating scale data, each subject's percentages of total ratings assigned and received in acceptance, tolerance, and rejection were then converted via an arc sine transformation (see Myers, 1979, and Smith, 1976, for further justification of this statistical manipulation). Thus, the subjects' arc sine transformed percentages of assigned and received status became the dependent variable metric for comparisons across the behaviorally disordered, learning disabled, and nonhandicapped groups. This method of data treatment is similar to other recent sociometric studies involving handicapped students (cf. Coben & Zigmond, 1986; Sabornie, 1987; Sabornie & Kauffman, 1987; Sabornie et al., 1987-1988).

For reliability purposes, the primary investigator and research assistant coded all data collected and checked each other's total ratings obtained on each subject. Agreement was 100% for assigned status of the 63 matched subjects and 99% (n = 12 for ratings not in agreement) for received status. In the latter case, the lower of the two coded totals was used for those subjects in which total were not exactly equal.

RESULTS

Data were analyzed with SPSS and Statpac Version 2.1 (Northwest Analytical, 1984). The behaviorally disordered, learning disabled, and nonhandicapped subjects assigned 461 ($M = 22.0$, $SD = 4.3$), 466 ($M = 22.2$, $SD = 4.8$), and 465 ($M = 22.2$, $SD = 4.2$) valid ratings, respectively. The behaviorally disordered, learning disabled, and nonhandicapped comparison groups received, respectively, 421 ($M = 20.05$, $SD = 5.9$), 420 ($M = 20.0$, $SD = 5.8$), and 413 ($M = 19.7$, $SD = 6.1$) valid ratings from their classmates. The total number of assigned ratings is greater than those received because 498 students were listed on the class rosters, and 424 students made up the unmatched nonhandicapped population who rated the subjects.

Assigned status. Each subject's arc sine transformed percentages of total ratings assigned to their peers in acceptance, tolerance, and rejection were used as separate dependent variables (comparison group membership was the independent variable) in three, one-way analysis of variance (ANOVA). This was performed, along with accompanying post hoc tests (i.e., Tukey where necessary), to test whether the three samples differed in sociometric status assigned to their shared classmates. Group means and standard deviations in the three assigned status categories are presented in Table 1.

The comparison groups did not differ significantly in assigned acceptance, $F(2,60) = .46$, $p = .64$, tolerance, $F(2,60) = 1.28$, $p = .29$, or rejection, $F(2,20) = .61$, $p = .55$. With particular attention directed toward the behaviorally disordered subjects in comparison to the other samples, the elementary level groups of the present study perceived their peers in a very congruent manner.

TABLE 1

*Means and Standard Deviations of Comparison Groups Assigned Sociometric Status**

Group		Sociometric Category	Mean	Standard Deviation
BD		Acceptance	1.29	.78
LD		Acceptance	1.44	.48
NH		Acceptance	1.45	.54
	Total	Acceptance	1.40	.61
BD		Tolerance	.91	.49
LD		Tolerance	.99	.64
NH		Tolerance	1.17	.51
	Total	Tolerance	1.02	.55
BD		Rejection	1.00	.64
LD		Rejection	.87	.52
NH		Rejection	.82	.44
	Total	Rejection	.89	.54

*Expressed as arc sine transformed percentages of total assigned ratings

Received status. Three additional one-way ANOVAs were performed to compare the samples' received sociometric status from their shared nonhandicapped classmates. Arc sine transformed percentages of total ratings in received acceptance, tolerance, and rejection were used as dependent measures with group membership again serving as the independent variable. The comparison groups' received status means and standard deviations are presented in Table 2.

TABLE 2

Means and Standard Deviations of Comparison Groups Received Sociometric Status[*]

Group		Sociometric Category	Mean	Standard Deviation
BD		Acceptance	1.10	.50
LD		Acceptance	1.42	.42
NH		Acceptance	1.61	.49
	Total	Acceptance	1.37	.51
BD		Tolerance	1.13	.36
LD		Tolerance	.91	.30
NH		Tolerance	1.06	.39
	Total	Tolerance	1.03	.36
BD		Rejection	1.11	.53
LD		Rejection	1.04	.62
NH		Rejection	.71	.39
	Total	Rejection	.95	.54

[*] Expressed as arc sine transformed percentages of total received ratings

The comparison groups differed significantly in received acceptance from their classmates, $F(2,60) = 6.37$, $p = .003$. The Tukey post hoc contrast of received acceptance showed that the behaviorally disordered sample differed significantly from the nonhandicapped group, but did not differ significantly from the learning disabled group. The learning disabled sample also did not differ significantly from the nonhandicapped group. In comparison to matched nonhandicapped peers, the behaviorally disordered students were not well accepted among their classmates. The received acceptance findings with regard to the learning disabled group (42.5% of their peers accepted them), on the other hand, can be interpreted in both a positive and negative manner: They were similar to nonhandicapped peers (the highest group in received acceptance with 52% of total ratings), but also similar to the behaviorally disordered sample (the lowest of the three groups in received acceptance with 27% of total ratings).

With regard to received tolerance, the matched triads did not differ significantly, $F(2,60) = 2.14$, $p = .13$. The percentages of total ratings evinced by the samples in received tolerance were separated by only 9% (BD = 28%, LD = 19%, and NH = 25%), indicating that approximately one-fifth to one-fourth of their shared classmates were neutral toward them.

The comparison groups differed significantly in received rejections,

$F(2,60) = 3.63$, $p = .033$. Follow-up tests indicated similar findings to the groups' status received in acceptance. That is, behaviorally disordered subjects once again differed significantly from the nonhandicapped sample, but they did not differ significantly from the learning disabled group. Learning disabled subjects (25% of their peers rejected them) did not differ significantly from the nonhandicapped sample (12% of classmates rejected them), although they were more similar to the behaviorally disordered group (28% of their peers disliked them) than nonhandicapped cohorts. The behaviorally disordered subjects did not fare well in received rejection; as a group they were once again found in negative social standing in comparison to nonhandicapped peers.

Assigned versus received status. A series of correlated t tests were conducted in an effort to examine the similarity of bi-directional status (or reciprocity) that existed between the separate behaviorally disordered, learning disabled, and nonhandicapped samples, and the larger nonhandicapped population in the shared PE classes. Subjects' arc sine transformed percentages of total ratings in assigned and received acceptance, tolerance, and rejection were once again used as the dependent variable with the received and assigned status categories serving as independent variables. Results indicated that, across all matched samples and the three components of social status, the subjects' received versus assigned ratings did not differ significantly.

Correlates of Social Status

Without reference to causality, the correlational findings that follow are an attempt at explicating the relationship between acceptance, rejection, and tolerance found with the behaviorally disordered, learning disabled, and nonhandicapped subjects used in the present study.

Subjects' arc sine transformed percentages of total ratings assigned and received in the status categories were entered as variables in a series of Pearson product-moment correlations with each comparison group. With regard to received acceptance and rejection, the three comparison groups demonstrated that these two sociometric components were negatively correlated (BD: $r = -.62$, $p = .003$; LD: $r = -.91$, $p = .000$; NH: $r = -.66$, $p = .001$). As the 63 matched subjects received a great degree of acceptance they received very little rejection, or vice versa. The magnitude of these correlational findings is particularly noteworthy in light of the small number (i.e., $n = 21$ in each case) of paired data sets used for analyses.

In terms of assigned acceptance and rejection the behaviorally disordered ($r = -.72$, $p = .000$) and nonhandicapped ($r = -.43$, $p = .051$; approaching significance) groups were somewhat similar, but learning disabled subjects acted alone ($r = -.08$, $p = .736$). Behaviorally disordered subjects who assigned a great amount of acceptance were not likely to assign a similarly high degree of rejections, or vica versa. Another domain in which behaviorally disordered and nonhandicapped subjects were similar, but not learning disabled equals, is received and assigned rejection. As behaviorally disordered and nonhandicapped subjects assigned high levels of dislike to their peers, classmates who rated them were just as rejecting (BD: $r = .45$, $p = .038$; LD: $r = .33$, $p = .144$; NH: $r = .46$, $p = .035$).

The three comparison groups were also congruent in relationships between assigned and received acceptance (BD: $r = .66$, $p = .001$; LD: $r = .46$, $p = .035$; NH: $r = .66$, $p = .001$), received rejection and tolerance (BD: $r = -.47$, $p = .031$; LD:

r = -.52, *p* = .016; NH: *r* = -.47, *p* = .031), and assigned acceptance and tolerance (BD: *r* = -.64, *p* = .002; LD: *r* = -.79, *p* = .000; NH: *r* = -.81, *p* = .000). These findings indicate that the matched triads and their shared classmates were quite similar in bi-directional acceptance, and as the subjects received high levels of rejection they also received low levels of tolerance, or vice versa. Furthermore, as the comparison groups assigned great amounts of acceptance they were also assigning very little tolerance, or vice versa.

An additional series of Pearson product-moment correlations were performed to determine the relationship between assigned and received social status and (a) IQ (for behaviorally disordered and learning disabled subjects only); (b) grade level; and (c) years in special education (for behaviorally disordered and learning disabled groups only). Intelligence quotient was not correlated significantly to any type of assigned or received status across the mildly handicapped samples. Grade level was significantly correlated with assigned rejection of only the behaviorally disordered group (*r* = .49, *p* = .001). As the behaviorally disordered pupils examined here reached higher grades they were likely to be somewhat negative toward their peers. Lastly, the number of years a behaviorally disordered subject had spent in special education was not correlated to social status of any type, but time in special education was significantly correlated with assigned rejection of the learning disabled sample (*r* = .44, *p* = .024). In other words, the longer the learning disabled subjects had received special education the more negative they were toward their classmates.

DISCUSSION

The present study demonstrated that elementary level behaviorally disordered and learning disabled subjects are quite similar in both assigned and received mainstream classroom social status. The behaviorally disordered group, unfortunately, was also shown to be unaccepted and rejected more than comparison nonhandicapped peers. Matched samples and the nonhandicapped population that shared PE classes were also similar in how they perceived each other. Because the present study was a replication of the Sabornie et al. (1987-1988) research, the discussion below, with particular attention directed toward behaviorally disordered students, will focus on how the results of the two studies are similar or different.

The results of the present study and the Sabornie et al. research are similar in that behaviorally disordered students were found to differ significantly from their nonhandicapped cohorts in both received acceptance and rejection. The results of other studies also show that social rejection by their peers is a constant for behaviorally disordered students in the mainstream (e.g., Sabornie, 1987; Sabornie & Kauffman, 1985; Vacc, 1968, 1972). It appears that behaviorally disordered pupils of all ages do not fare well in social standing among their peers in regular classes, but the above collective findings could be the result of inherent problems evident in behaviorally disordered pupils rather than outcomes of sociometric research. The clause "inability to build or maintain satisfactory relationships with peers" is included in the definition of behavioral disorders. The results of this study and earlier research simply show that at least part of the behavioral disorders definition is indeed accurate in terms of social status in regular classes.

The present investigation and Sabornie et al. (1987-1988) are similar also in findings showing behaviorally disordered students to approximate learning disabled and nonhandicapped pupils in the three types of assigned social status. Behaviorally disordered pupils of various grade levels can be just as accepting, rejecting, and tolerant of their peers in spite of receiving higher rejection and lower acceptance than matched nonhandicapped peers. What confounds the results of the present study is not that nonhandicapped subjects were accepted, but the fact that they showed remarkably similar correlations, when compared with behaviorally disordered students, in assigned and received acceptance and rejection. What will assist in additional understanding of the nuances of social status with behaviorally disordered students is research that identifies specific behavioral correlates to not only received acceptance and rejection, but also assigned social status. Research exists showing the educably mentally retarded students' academic incompetence is related to their low levels of received acceptance, and inappropriate behavior is related to their high levels of social rejection (Gottlieb, Semmel, & Veldman, 1978). Similar research is necessary to understand completely how the social milieu in the mainstream interacts with overt behavior of behaviorally disordered pupils.

The results of the present investigation and that of Sabornie et al. (1987-1988) differ in several ways. The findings reported here indicate that behaviorally disordered subjects and the nonhandicapped population did not differ in how they perceived each other. Sabornie et al. and Sabornie (1987) showed that behaviorally disordered students did not experience reciprocity of status with their peers. Behaviorally disordered students in both of these other studies assigned significantly more acceptance than they received; they also assigned significantly less tolerance than they received (Sabornie, 1987), and received more rejection than they assigned (Sabornie et al., 1987-1988). It appears that there is no consistency of reciprocal status when behaviorally disordered and nonhandicapped students rate each other. An alternative explanation for these inconsistent findings across studies is that the specific label of behaviorally disordered may interact with reciprocal social status in idiosyncratic ways, or only by chance.

Another area of difference between the results of the present study and those of Sabornie et al. (1987-1988) concerns the relationship between IQ of the behaviorally disordered subjects and components of their social status. Findings here indicate no significant relationships between IQ of behaviorally disordered subjects and assigned and received sociometric choices. In the Sabornie et al. study, however, behaviorally disordered adolescents' IQs were significantly correlated with received tolerance (i.e., $r = -.48$) and received rejection (i.e., $r = .50$). One explanation for the correlational differences shown in the two studies could be a possible age effect. That is, because the present study examined elementary level students and Sabornie et al. used high school adolescents, perhaps the longer a behaviorally disordered student stays in school the more chance IQ has to interact with their social standing. Nevertheless, additional research should attempt to further explicate how IQ and social status commingle with behaviorally disordered pupils of all ages.

An additional difference between the findings of the present study and Sabornie et al. is related to social status similarities and differences of behaviorally disordered and learning disabled students. These two groups of students examined here did not differ significantly in received or assigned status. Sabornie et al. also showed that behaviorally disordered and learning disabled students were similar in all categories of assigned status, but the two groups differed significantly in received acceptance (i.e., behaviorally disordered students were less accepted). Although two studies with the same types of mildly handicapped pupils do not constitute an extensive body of research, it is nevertheless important to note that behaviorally disordered and learning disabled students in both investigations were statistically similar in *most* areas of cross-categorical social status. At least Hallahan and Kauffman's (1976, 1977) earlier mentioned conclusions regarding similarities of behaviorally disordered and learning disabled students are valid in the two studies contrasted here.

Findings of the present study related to the relationship between received rejection and acceptance deserve special highlighting. Because received acceptance and rejection were significantly negatively correlated across all three comparison groups, it may no longer be necessary, at least with elementary level behaviorally disordered and learning disabled students, to separate acceptance from rejection for statistical analyses. This very tentative finding, showing that acceptance and rejection may form poles of the *same* continuum, is certainly worthy of additional research with other mildly handicapped groups. Based on results of the present study, aggregating acceptance and rejection into a global status score, a common procedure in rating scale and peer nomination sociometry for a number of years, may still have merit. The problem with the "one score" approach to analyzing social status, however, is that one datum cannot explain what effect tolerance and familiarity have when peers rate each other. Moreover, the separation of sociometric components is necessary in order to obtain a *comprehensive* view of social standing among group members.

Limitations of the present research include the following methodological issues. The behaviorally disordered, learning disabled, and nonhandicapped comparison groups were small, females (vs. males) and Blacks (vs. whites) comprised very small subgroups in the samples, and by necessity, subjects were matched on several variables. The results, therefore, are typical of mostly white males who do not qualify for free or reduced price lunch and who have other IQ and grade level characteristics. The inability to control for IQ of the nonhandicapped subjects is another factor that could have contributed to unusual findings. Intelligence quotient of the behaviorally disordered and learning disabled samples was not significantly correlated with any type of sociometric status, but the same cannot be said, unfortunately, for the nonhandicapped sample whose IQs were unknown. Furthermore, sociometry has a conspicuous weakness: it does not uncover *why or how* someone rates another in a specific manner. It is important to know how someone is perceived by his or her classmates, but just as robust are data that indicate the rationale for such perceptions.

In conclusion, one key to the success or failure of mainstreaming individual handicapped students rests with the quality of the social environment that they encounter. A regular classroom setting that is rife with unaccepting and rejecting classmates, while justifiable for academic purposes, still appears somewhat questionable for those behaviorally disordered pupils who will encounter the social ostracism. If mainstreaming is to continue — and it must — additional remedies are necessary for behaviorally disordered students' dysfunctional social relations with peers. A change in philosophy in terms of social domain remediation of behaviorally disordered students also seems in order. Forman (1987) recently suggested not to concentrate on individuals with dysfunctional social relations, but focus on the context of the poor relationship. Forman also concluded that adjusting the variables of the social relationship "breakdown" may be more powerful than emphasis on the child's deficit. Future research must obviously validate this new approach to dealing with those who have social relations problems, but one thing is clear: The inadequate peer relationships of mildly handicapped pupils in the mainstream, especially those identified as behaviorally disordered, need more than casual attention.

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8

Depression and Suicide

Treatment of Childhood and Adolescent Depression: Review and Recommendations

John W. Maag

ABSTRACT

Treatment of depressed students represents a growing concern to special educators, yet has received limited attention. The results of early psychological treatment efforts were reported in psychodynamic case studies. Single-subject design studies employing social skills training procedures have emerged, but suffer from methodological flaws. Three group treatment design studies have employed cognitive-behavioral techniques for treating depressed students in school settings. These techniques are available for special educators to employ with depressed students. However, implementing interventions requires the ability to make sequential decisions as to which techniques are appropriate for particular students. The stress inoculation paradigm offers special educators a structured, systematic format flexible enough to adapt techniques to meet depressed students' specific deficits. In this article depression treatment techniques are reviewed and the stress inoculation training paradigm is presented as an intervention for depressed students.

Depression is increasingly being identified among students labeled seriously emotionally disturbed (Cullinan, Schloss, & Epstein, 1987; Mattison et al., 1986), learning disabled (e.g., Stevenson & Romney, 1984), and educably mentally retarded (Reynolds & Miller, 1985). Forness (1988) found that a sample of depressed students receiving treatment at the UCLA Neuropsychiatric Institute largely attended regular classes prior to hospitalization, but required special education services subsequent to their return to public school. Special educators can play a pivotal role in treating the behavioral and cognitive characteristics manifested by depressed exceptional students. Intervention is necessary to reduce severity of depression and progression of other concomitant learning and behavior problems (Maag & Rutherford, 1987).

Treatment of depressed students in school settings is still in its infancy, partially because depression has been viewed exclusively as the domain of child psychiatry. The majority of treatment outcome studies are confined to psychiatrists' use of pharmacological agents such as tricyclic antidepressants (Petti & Conners, 1983; Petti & Law, 1982). Psychological intervention strategies used with depressed adults (e.g., behavioral, social skills training, cognitive, self-control) appear applicable with depressed children and adolescents as well (Kaslow & Rehm, 1983; Maag & Rutherford, 1987). These intervention strategies currently are used by special educators to remediate a variety of problematic student behavior such as aggression, noncompliance, social incompetence, and withdrawal (c.f. Kauffman, 1985). These behaviors also are characteristics of depression (Maag & Rutherford, 1988; Maag, Rutherford, & Parks, 1988). It is these characteristics depressed students manifest which special educators can target for intervention. However, special educators should not view themselves as the primary treatment agents for depressed youngsters; this remains the responsibility of child psychiatrists and clinical psychologists.

In order to treat the behavioral and cognitive characteristics of depression, special educators are faced with the task of identifying from among the plethora of available behavioral, cognitive-behavioral, and social skills training techniques. One approach would be to develop a very large intervention package that would attempt to cover all potential student deficits. However, this strategy would be cumbersome and time consuming. A more practical strategy would be to order potential techniques in a logical sequence and then to make sequential decisions as to which technique to employ in which order. A systematic, structured treatment approach that lends itself to sequential decision making is stress inoculation training (SIT). SIT is the most inclusive form of cognitive-behavioral therapy and presents a range of strategies from among which the most appealing and efficacious can be selected (Kendall & Bemis, 1983).

Although SIT has been used primarily with adults for pain management and anger control, it has been adapted to treat aggressive children and adolescents (Feindler & Fremouw, 1983; Maag, Parks, & Rutherford, in press; Schlichter & Horan, 1981). The author (Maag, 1988a) recently developed a stress inoculation training program for depressed adolescents. Significant reductions in depressive symptomatology and related dysfunctional cognitive self-statements were obtained for adolescents receiving SIT.

The purpose of this article is to review treatment outcome studies with depressed youth. This review is intended to familiarize special educators with the various techniques for treating depressed students. The stress inoculation paradigm is then presented as a systematic method for ordering these techniques in a logical sequence. Depressed students' specific deficits (e.g., affective, cognitive, behavioral) are identified and targeted for intervention.

TREATMENT APPROACHES WITH DEPRESSED YOUTH

Clinicians have begun identifying and treating children and adolescents manifesting depression, although interventions are still at the rudimentary level. There also is an absence of well-controlled studies with depressed children (Rapoport, 1977). In this section, three types of treatment intervention studies will be reviewed: psychodynamic, social skills training, and cognitive-behavioral approaches.

Psychodynamic Case Studies

Early nonpharmacological treatment of childhood and adolescent depression largely were based on traditional psychodynamic theory. Anthony (1970) described the psychoanalytic treatment of two depressed adolescents. A 16-year-old girl was depressed due to the divorce of her parents. She was hypersensitive to rejection, separation, and loss. Treatment involved addressing her dependency conflicts by analyzing narcissistic strivings and oedipal concerns linked to early memories of her father. Anthony treated a second girl after she twice attempted suicide. Guilt was the marked feature of her depression. Therapy consisted of providing insight into her oscillating maternal and paternal strivings. Although these case studies are interesting from a historical perspective, they offer few practical techniques special educators can use in school settings.

More recently, behavioral methodology such as social skills training has been used to treat childhood and adolescent depression. Social skills training represents an intervention special educators can employ with depressed students in classroom settings.

Social Skills Training

Calpin and Cincirpini (1978) described a multiple baseline analysis of social skills training for two hospitalized depressed children. Both children showed improvement following a program of instruction in appropriate interpersonal interactions, modeling of these social skills, and videotape feedback of their own responses. Calpin and Kornblith (1977) used a social skills training program including instructions concerning appropriate responses, modeling, behavioral rehearsal, and videotape feedback in treating four hospitalized depressed children. At completion of the multiple baseline design study, all of the children had improved on target behaviors. At follow-up, improvement was maintained for three of the children.

In a study on the observation and generalization effects of social skills training with four depressed emotionally disturbed children, Matson et al. (1980) used instruction, information feedback, modeling, role playing, and social reinforcement. Social skills training effects were immediate for increasing positive social responses on role-play scenarios. Children also were able to use their newly acquired social skills in untreated but similar social situations and in their natural environment.

Petti, Bornstein, Delamater, and Conners (1980) described the assessment and treatment of a 10½-year-old girl on an inpatient unit who was chronically depressed. Several treatments were used including social skills training. Initial treatment consisted of individual therapy to help her understand her feelings, a psychoeducational intervention to help her become reinterested in school, and a creative dramatics group to improve her peer interactions. Family therapy also was conducted with her foster parents. These treatments were not particularly effective in alleviating her depression. Imipramine treatment and social skills training were then conducted to help facilitate her return home. Training consisted of instructions about how to interact, behavioral rehearsal, and performance feedback. Deficient behaviors (e.g., eye contact, smiles, duration of speech, response to compliments, and requests for new behavior in response to unreasonable demands) were targeted for a multiple baseline analysis of treatment. Social skills training resulted in improvement in all target behaviors.

Frame, Matson, Sonis, Fialkov, and Kazdin (1982) used behavioral techniques to treat a borderline mentally retarded 10-year-old depressed male inpatient experiencing suicidal thoughts and gestures, violent temper outbursts, and poor school performance. Operationally defined behaviors targeted for a multiple baseline analysis of treatment were inappropriate body position, lack of eye contact, poor speech quality, and bland affect. Treatment included 20-minute sessions for 20 days of instruction, modeling, role plays, and feedback. Each behavior improved with treatment and remained at improved levels during a 12-week follow-up assessment.

Schloss, Schloss, and Harris (1984) conducted a multiple baseline analysis of a social skills training program with three depressed male inpatients. Five behaviors were targeted for intervention: greets entering adult; says "good-bye" to adult leaving the room; greets adult when patient enters room; says "good-bye" to adult when patient leaves room; and continues conversation following a greeting. Patients received five 30- to 40-minute training sessions involving modeling, behavioral rehearsal, feedback, and contingent reinforcement. Treatment was effective for increasing interpersonal responses of all three adolescents. A 9-month follow-up was conducted in the natural classrooms with two of the three adolescents. Rate of subjects' "greeting adults when subjects entered a room" and rate of "continuing conversation following a greeting" were maintained.

These studies demonstrate the use of social skills training procedures for treating depressed youth. However, a methodological flaw is the lack of isolating the effects of social skills training from psychopharmacological agents (e.g., Petti et al., 1980). Additionally, while clinical levels of depression were frequently obtained during baseline phases, posttreatment depression measures were often not collected (e.g., Schloss et al., 1984). Although social skills deficits have been postulated to be responsible for depression in some adults (Lewinsohn, 1974), demonstrating increases in isolated social skills does not provide adequate proof that depression has been alleviated.

Cognitive-Behavioral Interventions

Early cognitive-behavioral interventions for treating childhood and adolescent depression were based on Ellis' (1962) Rational-Emotive Therapy (RET). Two case studies using RET to treat childhood and adolescent depression have been reported in the literature. Although suffering from methodological flaws inherent in case study designs, these two reports illustrate the technique of disputing irrational beliefs which is an essential component of cognitive restructuring.

DiGiuseppe and Bernard (1983) reported two case studies using RET principles to treat childhood depression. Empirical disputing of irrational self-statements was used successfully with a 9-year-old girl in a single-parent family who was depressed over the infrequent visits of her father. Challenging the girl's belief that her father did not care for her proved beneficial. Another treatment centered on a 12-year-old depressed boy whose father was depressed and mother was argumentative. It was discovered that this boy believed that he was destined to be depressed if his father was, that one had to be unhappy if his parents fought, and that it is awful to have both a depressed father and a belligerent mother. Direct disputing of these irrational beliefs enabled this boy to cope successfully with these circumstances.

Three studies have employed control group design formats to assess the efficacy of school-based cognitive-behavioral techniques for depressed students. Butler, Miezitis, Friedman, and Cole (1980) compared a role-play treatment and a cognitive restructuring treatment with attention-placebo and wait-list control groups in a study with 56 depressed 5th and 6th grade children. The role-play condition emphasized teaching skills that facilitated social interaction and social problem solving. Cognitive restructuring was a modification of Ellis' RET approach emphasizing recognition of irrational, self-depreciating automatic thoughts and adoption of more logical and viable alternatives. Each of the treatment and attention control groups received 10 one-hour sessions administered in small groups of 6 to 8 children. At posttreatment, significant effects were found for the two active treatments on a number of depression measures.

Reynolds and Coats (1986) conducted a study with 30 moderately and severely depressed adolescents who were assigned to either a cognitive-behavioral treatment, relaxation treatment, or waitlist control group. Cognitive-behavioral therapy combined components of Beck's cognitive therapy, Lewinsohn's reinforcing events, and Rehm's self-control therapy. Relaxation therapy was based upon Jacobsen's progressive relaxation technique. Both treatments involved contingent reinforcement, homework assignments, and self-monitoring. Subjects were seen in four groups (two per treatment condition) for 10 50-minute sessions during a 5-week period at the high school they attended. Both cognitive-behavioral and relaxation training, compared to a waitlist control condition, resulted in substantial and statistically significant reductions in depressive symptoms.

Stark, Reynolds, and Kaslow (1987) compared the relative efficacy of self-control training and behavioral problem-solving training with 29 moderately to severely depressed children ages 9 to 12 years. Both treatments involved 12 45- to 50-minute small group sessions lasting over 5 weeks. Both treatments involved instruction in the relationship between mood and the frequency of engaging in pleasant activities, self-monitoring, and reinforcement. Self-control training emphasized setting more realistic standards of performance, setting realistic subgoals, self-reinforcing more, self-punishing less, and attributing success to internal, stable factors and failure to external factors or to effort. Behavioral problem solving emphasized social relationships, interpersonal problem solving, and the expression of feelings. Both treatments results in decreased depressive symptomatology. However, there were few differences between the two treatments, probably because both shared common elements emphasizing increasing pleasant activities and self-monitoring.

CONCEPTUALIZING THE INTERVENTION PROCESS

Social skills training and cognitive-behavioral intervention techniques can be used by special educators with depressed exceptional students. In this context, various intervention techniques are matched to depressed students' identified skill deficits. Thus, the special educator avoids the precarious position of being viewed as the primary treatment agent. Rather, he or she identifies the overt and covert behaviors the depressed student exhibits and tailors an intervention to these areas.

An important concern involves the appropriate selection of available techniques. Attempting to implement all available techniques would be cumbersome and time-consuming. Conversely, many depressed students exhibit a variety of skill deficits, and employing a single intervention technique may not be sufficient. A solution to this dilemma resides in the application of the stress inoculation training (SIT) paradigm. SIT represents an intervention special educators can use to treat the various behavioral and cognitive manifestations of depression.

STRESS INOCULATION TRAINING FOR DEPRESSED STUDENTS

Stress inoculation training (SIT) is a multileveled, multifaceted cognitive-behavioral intervention that combines elements of didactic teaching, Socratic discussion, cognitive restructuring, problem solving and relaxation training, behavioral and imaginal rehearsal, self-monitoring, self-instruction and self-reinforcement, and environmental manipulation (Meichenbaum, 1985). SIT is not a loose compendium of unrelated methods, but rather a set of interconnected techniques that can be combined in a systematic way. SIT is implemented in three phases: (a) *conceptualization;* (b) *skills acquisition and rehearsal;* and (c) *application and follow-through.* In Phase I students are educated about the causes, consequences, and alternative methods of handling depression. Phase II involves training students in relevant skills for coping with depression. In Phase III students practice applying coping skills in vitro and in vivo during exposure to regulated doses of stressors that arouse but do not overwhelm their coping skills. The three phases of SIT are described as they relate to treating the behavioral and cognitive characteristics exhibited by depressed youngsters.

Phase I: Conceptualization

Phase I focuses on establishing collaborative relationships with students, soliciting information about the nature of their depression, and conceptualizing depression as being amenable to change. Collaborative relationships are established using Rogers' (1951) three basic components: empathy, congruence, and positive self-regard. Maag (1988b) described several school-based techniques teachers can use to develop collaborative relationships with their students. These techniques involve identifying students' verbal and nonverbal behaviors and having teachers adapt these student responses during social interactions. Establishing relationships is important for mediating subsequent behavior change (Waterhouse & Strupp, 1984) and for increasing students' positive expectations and beliefs about treatment (Rodin, 1983).

Three techniques are used to solicit information about the nature of students' depression: (a) interviewing, (b) imagery recall exercises, and (c) self-monitoring techniques. The Peterson Interview Form (PIF; 1968) is a structured format for defining problem behavior and identifying its determinants, although this information can be acquired without using published forms. Regardless of the method used, information gathered should include severity, duration, and extent of depression and the conditions, antecedents, and consequences surrounding depressive episodes.

Imagery recall techniques help students attend to aspects and details of their depressive episodes that might otherwise be overlooked or underemphasized during interviewing. Students are asked to describe their feelings and thoughts experienced during depression-engendering situations. Several techniques are helpful for students experiencing difficulty reporting their thoughts and feelings: (a) define and label the range of possible affective reactions and thoughts students could have during their experiences; (b) engage students in "pantomime games" by having them exaggerate aspects of their experiences to enhance awareness; (c) use an "imaginary other" who could voice similar concerns; or (d) model self-disclosure by using examples from other's life experiences.

Self-monitoring can also be used to elicit information. Students record their thoughts, feelings, and behaviors by completing "depressogenic thoughts" diaries. Diaries should follow the A-B-C format designed by Ellis (1962), where A represents the event or experience, B is the belief students hold about the event, and C is the consequence resulting from their belief.

Phase I concludes after reconceptualizing students' depression in terms which translate specific symptoms as being amenable to solutions. Depression

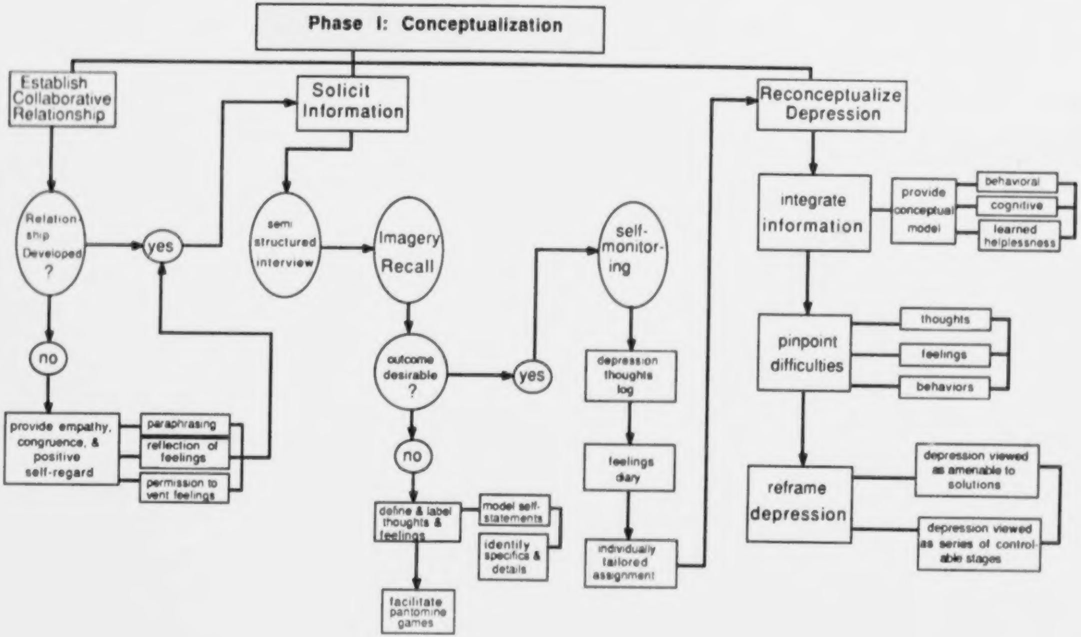
Phase I: Conceptualization
Establish Collaborative Relationship
Solicit Information
Reconceptualize Depression
Relationship Developed ?
yes
no
provide empathy, congruence, & positive self-regard
paraphrasing
reflection of feelings
permission to vent feelings
semi structured interview
Imagery Recall
outcome desirable ?
yes
no
define & label thoughts & feelings
model self-statements
identify specifics & details
facilitate pantomine games
self-monitoring
depression thoughts log
feelings diary
individually tailored assignment
integrate information
provide conceptual model
behavioral
cognitive
learned helplessness
pinpoint difficulties
thoughts
feelings
behaviors
reframe depression
depression viewed as amenable to solutions
depression viewed as series of controlable stages

Figure 1. *Flow chart illustrating the sequence of procedures involved in implementing Phase I: Conceptualization*

is proposed as a series of stages under students' control. Conceptual models of depression can be used (e.g., cognitive, behavioral, learned helplessness) to interpret students' feelings, thoughts, and behaviors experienced during depression-engendering situations. Figure 1 illustrates the process involved in implementing Phase I of SIT.

Phase II: Skills Acquisition and Rehearsal

The objective of Phase II is to provide students with coping techniques for dealing effectively with depression. Coping techniques include what Lazarus and Launier (1978) called palliative (emotion regulation) and instrumental (problem focused). Although the order in which coping techniques are taught varies, palliative techniques are generally taught first because they are readily learned and frequently mediate acquisition of specific problem-focused skills (Maag et al., in press; Meichenbaum, 1985).

Palliative coping techniques. Two types of palliative coping techniques are appropriate for use in school settings: muscular relaxation and activity scheduling. Robin, Schneider, and Dolnick (1976) developed a muscle relaxation exercise for teaching self-control to emotionally disturbed grade school students which involved tensing and relaxing muscles of various parts of the body. Students were instructed to be aware of how pleasant that part of the body felt when relaxed. This procedure was repeated with arms, legs, feet, hands, face, and stomach. After relaxation responses were practiced separately, they were incorporated into one motion — the whole body was tensed for a count from one to ten and then quickly relaxed. Relaxation training has been an effective treatment for adolescent depression (Reynolds & Coats, 1986).

Activity scheduling is another emotion-regulation technique easily used in school settings. Meichenbaum (1985) discussed the relaxing nature of performing absorbing activities. Benefits of scheduling pleasurable activities for depressed youth include reduction of passivity and time spent ruminating on negative thoughts (Emery, Bedrosian, & Garber, 1983). Reinforcement schedules such as Cautela's Adolescent Reinforcement Survey Schedule (ARSS; 1981) can be administered to determine potential reinforcing activities for students.

Instrumental coping techniques. Instrumental coping techniques should be tailored to the needs and environmental demands of students' specific deficits. Three common techniques are cognitive restructuring, problem-solving training, and social skills training. These techniques should be ordered in a logical sequence. For example, if particular students lack interpersonal skills, social skills training would be used first. Conversely, if students engage in problematic behaviors that interfere with their ability to complete self-monitoring exercises, then behavioral techniques such as DRO, response cost, or token economies would be employed first.

Cognitive restructuring usually consists of two general techniques: (a) having students repeat self-affirmations and positive coping statements, and (b) challenging students' irrational beliefs. Self-affirmations, when stated repeatedly, can enhance students' positive feelings (Emery et al., 1983). Positive coping self-statements provide students with a method to respond more adaptively to various depression-engendering situations. Teaching students to subject their beliefs to critical scrutiny involves three steps: (a) looking at the evidence (hypothesis testing); (b) exploring alternative explanations (problem solving); and (c) examining consequences if what they believe turns out to be true (Beck, Rush, Shaw, & Emery, 1979, provide a detailed account of cognitive techniques for depression).

Problem-solving training focuses on teaching such skills as alternative solution thinking, means-ends thinking, consequential thinking, and causal thinking (Spivack & Shure, 1975). Wasik's (1984) format can be used with depressed students:

Steps	**Questions/Actions**
Problem identification	What is the concern?
Goal selection	What do I want?
Generation of alternatives	What can I do?
Consideration of consequences	What might happen?
Decision making	What is my decision?
Implementation	Now do it!
Evaluation	Did it work?

These steps and questions/actions help students deal with various depression-engendering situations.

Social skills training generally involves combinations of modeling, behavioral rehearsal, role playing, self-instruction, corrective feedback, and reinforcement. Students' specific interpersonal skill deficits are targeted for intervention (Goldstein, Sprafkin, Gershaw, & Klein, 1980, provide a detailed account of social skills training procedures). It is important to note that there will always be some overlap between instrumental coping techniques. This overlap often is desirable and special educators should not be unduly concerned about combined applications of various techniques. Figure 2 illustrates the process involved in implementing Phase II of SIT.

Phase III: Application and Follow Through

The objective of Phase III is to help students practice their coping skills both in training sessions (in vitro) and in real-life (in vivo). Imagery and behavioral rehearsal training are provided in vitro, while graded homework assignments with significant others are provided in vivo.

In vitro practice begins with imagery rehearsal derived from Wolpe's (1959) systematic desensitization paradigm. Teacher and student generate hierarchies of scenes from least to most stressful. Students are then asked to imagine coping with progressively more threatening scenes while relaxed. However, instead of following Wolpe's practice of terminating the scene when the student experiences stress, students imagine coping successfully with the stressful situation using the skills they have acquired. In this way students learn to notice and anticipate signs of distress so that they can become cues to produce coping responses.

After successfully completing imagery rehearsal exercises, students behaviorally rehearse coping responses to stressful situations. Scenarios are generated and modeled. Role playing and role reversal are included to highlight specific coping responses. Students are taught to anticipate high risk failure situations and plan ahead for such occasions. Planning and behavioral rehearsal lowers risks of becoming overwhelmed at times of severe stress (Meichenbaum, 1985).

The final step involves graduated in vivo exposure using acquired coping

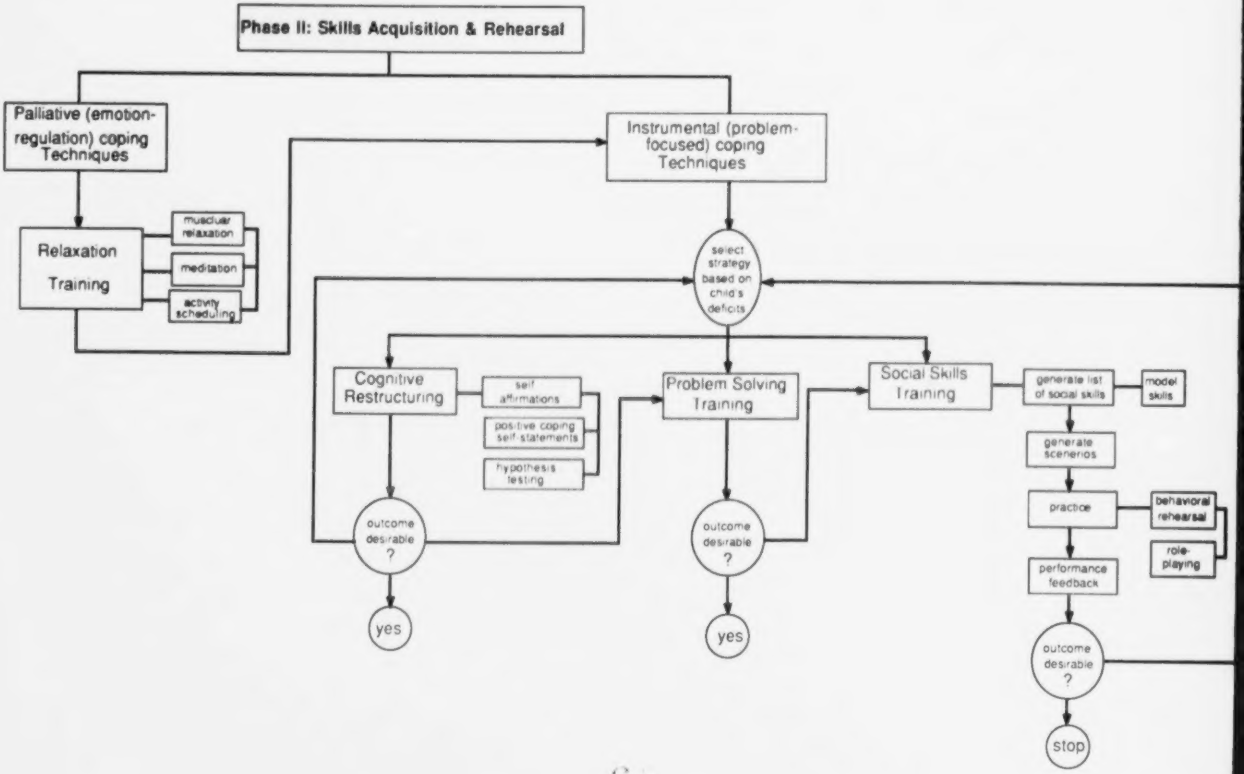
Phase II: Skills Acquisition & Rehearsal
Palliative (emotion-regulation) coping Techniques
Instrumental (problem-focused) coping Techniques
Relaxation Training
muscluar relaxation
meditation
activity scheduling
select strategy based on child's deficits
Cognitive Restructuring
self affirmations
positive coping self-statements
hypothesis testing
Problem Solving Training
Social Skills Training
generate list of social skills
model skills
generate scenerios
practice
behavioral rehearsal
role-playing
performance feedback
outcome desirable ?
yes
outcome desirable ?
yes
outcome desirable ?
stop

Figure 2. *Flow chart illustrating the sequence of procedures involved in implementing Phase II: Skills Acquisition and Rehearsal*

skills in real-life situations beginning at a point that arouses students' coping skills but does not overwhelm them. Students undertake graded homework assignments with significant others. Homework involves practicing coping skills with their teachers, peers, siblings, and/or parents. Homework assignments should be concrete, observable, and measurable while increasing in difficulty over the course of training. Assignments include a *do* statement and a *quantity* statement indicating what students are to accomplish and how often the tasks are to be completed, respectively. Homework assignments should be written down and reviewed together by teacher and student to consider any possible difficulties that may inhibit successful task completion. Outcome of assignments should be checked, graded, and reinforcement provided commensurate with student performance levels. Figure 3 illustrates the process involved in implementing Phase III of SIT.

RECOMMENDATIONS

Many of the treatment techniques developed for adults can be applied effectively with depressed youth. However, children and adolescents are not miniature adults and therefore treatment expectations must reflect a developmental perspective. Treatment works best, for example, when it remains problem focused. Relying too heavily on helping students gain insight, or conversely,

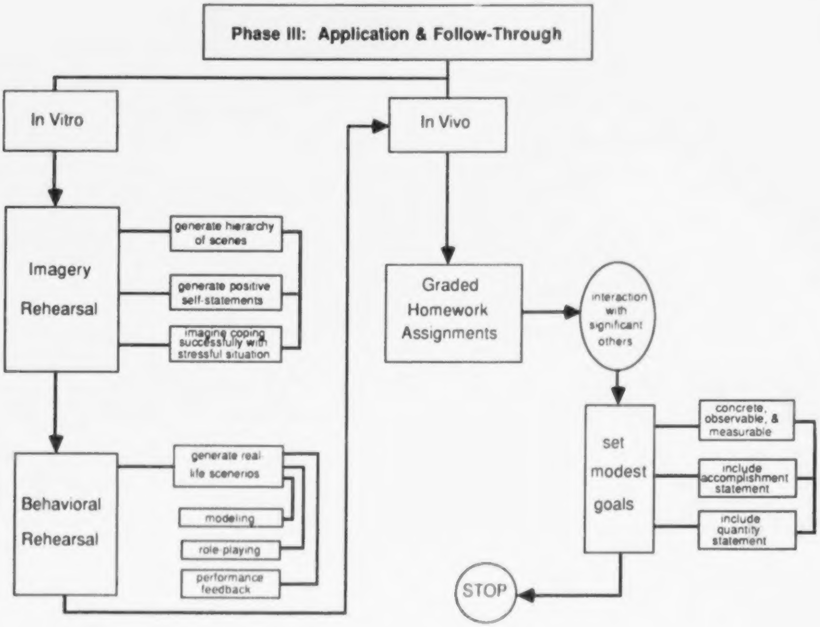
Phase III: Application & Follow-Through
In Vitro
In Vivo
Imagery Rehearsal
generate hierarchy of scenes
generate positive self-statements
imagine coping successfully with stressful situation
Behavioral Rehearsal
generate real-life scenerios
modeling
role-playing
performance feedback
Graded Homework Assignments
interaction with significant others
set modest goals
concrete, observable, & measurable
include accomplishment statement
include quantity statement
STOP

Figure 3. *Flow chart illustrating the sequence of procedures involved in implementing Phase III: Application and Follow-Through*

giving them platitudes for getting better will often result in students remaining silent for long periods of time, refusing to discuss significant topics, or skipping from one seemingly unrelated issue to another (Emery et al., 1983; Maag, 1988b). Therefore, the pace of treatment often can be slow and prolonged.

There are several recommendations which teachers may find useful when deciding to develop and implement interventions for depressed students. It is important to break down treatment themes into one or two specific objective goals at a time. Teachers should spend as much time as possible reducing threat and building rapport with students, while tolerating a modicum of noncompliance — not everyone is capable of self-disclosing personal information immediately — so teachers should respect students' sense of privacy and remember that not all sensitive topics require attention during one course of treatment. Maintaining family contact is crucial so that techniques used at school can be monitored and continued by parents in the home. Contact with parents also provides teachers with additional information on students' behavior outside the school setting. Finally, avoid assigning complex homework assignments at the beginning of treatment or to students who are already experiencing school difficulties. Overwhelming depressed students with work often only exacerbates their difficulties.

SUMMARY AND CONCLUSIONS

Treatment of childhood and adolescent depression has begun to receive attention, although research is still at the rudimentary level. Various cognitive and behavioral procedures used with depressed adults have been adapted for use with depressed youth. Early psychological treatment of childhood and adolescent depression consisted largely of psychoanalytic case reports which provide few techniques educators can use in school settings. However, some case reports illustrated applications of Ellis' RET approach of challenging irrational beliefs which is an important component of cognitive techniques. Social skills training techniques have been promising, but frequently lack of pre- and posttest depression outcome measures made it difficult to determine if acquiring social skills also lead to reductions in depression.

Three group treatment investigations have been conducted with depressed children and adolescents. Social skills training and cognitive restructuring procedures were contrasted in one study while cognitive behavior modification and relaxation training were used in another. All four treatments were effective for reducing depressive symptomatology while providing support for treating depressed students in school settings. However, the question of differential efficacy of various procedures remains unanswered. It may be that a combination of techniques would be most efficacious.

A problem school personnel may encounter when developing interventions for depressed students is determining which techniques are appropriate for students' specific deficits. Stress inoculation training (SIT) was presented as a method for sequencing various techniques into a comprehensive treatment program. SIT consists of three phases: (a) *conceptualization;* (b) *skills acquisition and rehearsal,* and (c) *application and follow-through.* SIT represents a structured, systematic format that is easily duplicated, yet is flexible enough for special educators to target depressed students' specific deficits for intervention.

When conducting SIT, teachers should keep training focused on specific problems that are broken down into one or two objectives. Considerable effort should be given to ensure that rapport has been established between student and teacher. Maintaining contact with parents is also important. Teachers should avoid assigning complex homework during initial phases of treatment or to students that are already having academic difficulties. Although much remains to be learned about treating depressed youth, school personnel can have considerable impact upon ameliorating depression.

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Comprehensive Suicide Prevention

Dennis J. Simon

ABSTRACT

The alarming incidence of adolescent suicide requires an effective response from our schools. One high school survey reported that 38% of its seniors had at one time considered suicide as an option, and 17% had hurt themselves when depressed. An increase in suicidal thought was shown from freshman to senior year, but no differences were seen between regular education and behaviorally disordered special education students. A comprehensive suicide prevention program is outlined that includes (a) faculty inservice, (b) student education, (c) depression management support groups, (d) crisis intervention, and (e) survivor support groups.

The incidence of adolescent suicide continues to be alarming. After accidental death, it has become the second leading cause of death for teenagers (Berman, 1987; Shipman, 1987). Many more adolescents experience suicidal thoughts. Their serious depression affects their health and their ability to profitably participate in schooling.

The extent of this problem was again verified through survey data from a large metropolitan high school characterized by racial, cultural, and socioeconomic diversity. Suicide prevention presentations were given to selected groups of students (969 seniors, 468 freshmen, and 65 behaviorally disordered students). When asked about their history of suicidal thoughts and activity, 38% of the seniors, 26% of the freshmen, and 35% of the behaviorally disordered students said they had at one time been depressed enough to consider suicide. Reporting that they had hurt themselves when depressed were 17% of the seniors, 18% of the freshmen, and 26% of the behaviorally disordered students. These figures suggest that a large number of students experience significant emotional pain and are potential suicide risks.

A comparison was made between these groups in terms of responses on both suicidal ideation and action. The only statistically significant difference was found between the freshmen and seniors in relation to suicidal thoughts. A significantly greater number of seniors reported having been depressed enough to consider suicide as an option ([1, N = 1436] = 15.33, $p < .01$). This difference is not unexpected with the advance into later adolescence. While there was a tendency toward increased reports of hurting themselves when depressed by behaviorally disordered students compared to their regular education counterparts, it fell short of statistical significance ([1, N = 1501] = 2.71, $p < .10$). Thus, regular education students are as likely to be at risk as behaviorally disordered special education students. This data highlights the relevance of suicide prevention activity within the high school curriculum for all students.

Unfortunately, most schools' first response to this crisis comes after the tragedy of a completed suicide. What is needed instead is a proactive stance. Comprehensive suicide prevention plans should be delineated that include systematic education, detailed crisis plans, and post-tragedy support.

This is clearly true for programs for the behaviorally disordered. Major depression is a common identifying characteristic qualifying students for these services. Aggressive or hyperactive behavior problems frequently contain a significant element of masked depression. Comprehensive strategies for suicide prevention must be part of the annual program agenda.

SUICIDE PREVENTION PROGRAMING

A descripton of a comprehensive suicide prevention program follows. It has been in place for 5 years at this same metropolitan high school. Its multifaceted interventions involve both behaviorally disordered and regular education students. Its five components include (a) faculty inservice, (b) student education, (c) depression management groups, (d) crisis intervention, and (e) survivor support groups.

Faculty Inservice

A trusted teacher is often the first adult to become aware of the fact that a student is at risk. This is particularly true in programs for the behaviorally disordered where smaller classroom sizes and individualized instruction increase the potential for close teacher-student relationships. This highlights the need for faculty inservice presentatons that train teachers in procedures for handling potentially suicidal situations.

The content of these faculty presentations should begin with general statistical information concerning the incidence of adolescent suicide capsulized in a straightforward but not alarmmist tone. Data to be highlighted should include the following:

1. After accidental death, suicide is now the number two killer of adolescents (Shipman, 1987).
2. While not an epidemic, adolescent suicide is on the rise, having tripled in the last 30 years (Shipman, 1987).
3. 13 out of 100,000 adolescents will commit suicide (Miller, 1983).
4. At our large high school, counselors talk with 4 or 5 students each week who are depressed enough to consider suicide as an option.

Behavioral changes indicative of increased risk and specific suicide alarm signals must be detailed. Behavior changes which in combination may indicate risk include (a) abrupt changes in personality (e.g., loud, outgoing student becomes quiet or withdrawn); (b) erratic behavior or sudden mood swings; (c) impulsive self-destructive risky behavior (e.g., sharp increase in drug or alcohol use, dangerous fast driving or other actions that could lead to physical harm; (d) sharp decline in appearance or performance; (e) withdrawal from friends and social activity; and (f) clearly very angry or very depressed affect but s/he is unable or unwilling to talk about it (Guetzloe & Johnson, 1985; Husain & Vandiver, 1984; Miller, 1983).

Specific suicide alarm signals include (a) suicide gesture or attempt; (b) direct references to suicide (e.g., I'm going to kill myself; I'd be better off dead; or There's nothing worth living for); (c) obsession with death evident through excessive talking about death or frequent references in poetry or art; and (d) making final arrangements evident through giving away prized possessions or saying goodbyes (e.g., I'll probably never see you again).

Practical intervention strategies should be outlined for responding to various levels of risk: (a) behavioral deterioration, (b) specific suicidal references and/or discussion, and (c) an actual attempt. Teachers require specific, practical instructions in what to do, what kind of questions to ask, and how to get help whether or not the potential victim is cooperative.

In terms of *what to do,* teachers should receive the following instructions:

1. Take seriously, it is not merely attention getting.
2. Give understanding and support, not moral judgment, put down, or anger.
3. Express concern about depression or suicide directly, talking about it reduces risk.
4. Assist student in seeking professional help by directing him/her to the school's psychologist or social worker and offering to go along to provide support.

In terms of *questions to ask,* teachers can receive the following suggestions:

1. What has been happening in your life that makes you feel this badly?
2. Do you have a plan (in general, the more detailed, proximate, and lethal the plan, the greater the risk; Miller, 1983)?
3. Have you taken any steps (e.g., swallowed pills)?
4. Have you ever attempted suicide before?
5. Who have you told and how have they responded?

In-house procedures and responsibilities must be clearly delineated for responses to students identified at risk. If suicide action has been taken, the student should be immediately taken to the nurse's office so that appropriate medical precautions can be initiated. If a student has not harmed her/himself but danger is immediate, the student should be taken to the nurse's office or some similar designated location to ensure safety while appropriate social service personnel are contacted. In this instance, do *not* leave the student alone. If strong but not immediate risk is present, a psychologist or social worker should be contacted and asked to assess the student. The teacher can offer to be present for this interview to help the student tell her/his story. This takes advantage of the rapport that the trusted teacher has established and assures more accurate self-disclosure.

When talking to the staff, the limits of confidentiality must be strongly highlighted. Suicidal thoughts or activity cannot be kept confidential under any circumstances. Students do not confide in teachers unless they want action taken. The follow-up activities of counseling staff should be outlined. They will assess risk and help the student to gain perspective on problems prompting suicidal thoughts. Parents will be contacted and guided in effective and empathic responses to the crisis. Appropriate referrals and ongoing support will be offered. Finally, reactions and responses to a completed suicide need to be briefly discussed. These include countering unrealistic staff guilt and describing the student survivor support program.

Student Education

In our experience, while a teacher may be the first adult to be made aware of a student's potential for suicide, fellow students are generally the first to be aware of a friend's suicidal talk or action. In the above survey, 40 to 50% of the students stated that a friend of theirs had discussed suicide with them. Therefore, students must be trained to respond appropriately to their friends' depression and suicidal behavior. In practice, this can enable them to become important participants in crisis intervention sessions rather than paralyzed bystanders falsely sworn to secrecy by troubled friends. In our high school, the entire student body receives educational input similar to faculty inservice material outlined above at least twice in their high school careers. The context for these presentations are a freshman orientation program outlining school support services and a program for seniors on transition and separation stress and suicide prevention. In addition to discussing school-based resources, directives for utilizing community resources when school is not in session are outlined.

The content of student presentations mirrors the outline of the faculty inservice. Students should be taught the warning signs that suggest that a friend of theirs might be at risk. They must be trained to respond with empathy in conversation and direct action to find counseling help. The two key points to get across are that (a) talking about suicide reduces risk, and (b) that it is important to breach a confidence of a friend rather than risk the ultimate loss of friendship through death. Students need to know how to reach directly school psychologists and social workers in regards to themselves or a friend.

Every suicide prevention presentation can conclude with a survey that asks questions related to depression and suicide, thus helping to define the need for further preventive activity. This survey should include a confidential means for requesting a meeting with a counselor to discuss these topics further regarding her/himself or a friend. This methodology routinely leads to a significant number of self-referrals.

Depression Management Support Groups

Problem characteristics of depressed and potentially suicidal adolescents frequently include many of the following characteristics: social isolation, impaired problem-solving skills, cognitive distortions, deficient communication skills for stating needs and feelings, lack of assertion, and substance abuse (Beck, Kovacs, & Weissmann, 1975; Miller, 1983; Shaffer, 1986). Group therapy is a recommended intervention strategy for addressing aspects of all of these issues. Group work is developmentally appropriate for adolescents and includes opportunities for positive peer influences. In a school setting, it can provide a time efficient method of follow-up for students first encountered in crisis. It becomes a context for continued monitoring of depression levels and suicide risk. Depression management groups should be the cornerstone of this preventive activity. This program is proactive in nature attempting to reduce the incidence of both suicide ideation and activity. However, these depression management groups should only be one component of an extensive support group program which among others includes groups for eating disorders, aggression replacement, and substance abuse. These problem areas are also characterized by self-destructive behavior. School counselors, psychologists, and social workers are appropriate leaders for these groups.

Depression management groups can provide an opportunity for self-disclosing social contact. Students are permitted to share burdens and provide assistance to one another. This activity counters the withdrawal and internalization of affect common to depressed adolescents.

At-risk teenagers lack effective problem-solving skills. They utilize strategies that are one dimensional, escapist, or impulsive. The group process can generate multiple alternatives to problem situations. Students can trade solution strategies and practice asking others for help.

Cognitive behavior modification strategies should be taught to challenge the distortions in analysis and self-perception that are characteristic of depressed students (Beck, 1976; Meichenbaum, 1977). Communication skills training can teach group members to directly and assertively state needs and feelings. Learning appropriate and effective expression of anger minimizes the potential for unspoken anger to accumulate, turn inward, and stimulate suicidal thoughts.

Crisis Intervention

Counselors, psychologists, and social workers should perform emergency assessments and crisis interventions and make referrals for students experiencing suicidal thoughts. The counselor's response must be direct, empathic, hopeful, and authoritative. Students should be given time to fully discuss their pain or sadness, and then be directly asked about suicidal thoughts and plans. Risk inherent in the plan can be evaluated in terms of specificity, lethality, availability of method, and the proiximity of helping resources (Miller, 1983). An evaluation of the student's tendency toward impulsivity including typical use of drugs or alcohol is essential. An impulsive, depressed adolescent may attempt suicide with less deliberation when under the influence of drugs or alcohol; and some forms of suicide such as jumping from a high place do not take much planning.

The counselor should continually offer realistic hope. He or she can provide perspective and potential alternatives for seemingly insolvable problems. An attempt should be made to shift the focus of disclosure from depression to anger. Frequently depression is anger blunted and turned inward. The constructive mobilization and expression of anger can counter depression and reduce suicidal risk. Since suicidal activity is also a form of communication, this focus may provide clues to significant others who need to be involved in crisis and conflict resolution.

Involvement with parents is central to successful crisis intervention activity. Parents must always be informed when suicide risk is present. They can be involved in emergency sessions in ways that facilitate action, minimize guilt, and reduce unproductive anger. Frequently, suicidal activity is an indirect but intense form of communication of anger toward parents or other significant people. The facilitation of a constructive verbal communication of this hostility in the presence of parents in and of itself may remove a student from dangerous risk for suicidal behavior. If the student is sent home, the parents should be instructed to increase supervision to a level consistent with clinical assessment at the conclusion of the crisis session. Parents must be told how to monitor for warning signs that might indicate the need for other protective measures. Information should be provided concerning local hospitals that can be contacted in an emergency or can provide information to parents on a 24-hour basis. A specific follow-up appointment for the next day should be arranged. If the crisis intervention counseling does not result in a reduction of suicidal risk and a believable commitment to avoid self-harm and cooperate with follow-up, then a protective hospitalization becomes necessary.

Survivor Support Program

In the event of a completed suicide, students must be offered individual and/or group counseling. The purpose of these activities is to facilitate healthy grief and mourning processes and to reduce the risk of contagion or cluster suicides. Survivor groups can be constituted through an informal procedure that begins with siblings and close friends and permits them to invite others. Those most affected and in need of support will not feel free to share their feelings if surrounded by more distant acquaintances or strangers. Other structures should be utilized for reaching those affected who were not close friends (e.g., classroom discussions and clear availability of individual contacts with counselors.

The focus of all of these survivor activities should be on constructive expression of feelings, countering of irrational guilt or blame, and discussion of coping skills for depression and anger. Students require an opportunity to express their sadness, anger, fear, and confusion. Irrational thoughts and beliefs should be confronted. These may include rescue fantasies, unrealistic responsibility or guilt, or unfair blaming of friends, parents, or other key adults. Often it is only after a completed suicide that peers recall presuicidal warning signs that had seemed insignificant at an earlier time. They need to discuss their regret without burdening themselves with unrealistic guilt.

Part of the focus of survivor groups can be on how they can support each other in this moment of grief, and how they can respond to each other at other times when depression is strong. It is essential to ask both friends of the victim and other students involved in support activities if there is anyone whose reaction to the suicide has them particularly alarmed or concerned about additional suicidal activity. Identified students should be sought out, professionally assessed, and offered additional crisis support.

Stages that students tend to pass through while coming to terms with their grief and loss are similar to coping with other deaths (Kubler-Ross, 1969). Initial denial and shock gradually give way to anger and depression. Survivors will frequently engage in various symbolic communications to say their goodbyes (e.g., grave visitations, dreams, poetry, or prayer). Adaptive grieving finally leads to a feeling of acceptance manifested through reduced preoccupation and more balanced memories.

It is critical to avoid glamorization of the suicide act and to delineate other alternatives for managing stress and despair. Large gatherings of students such as assemblies are specifically avoided to reduce the possibility of glorification of the act. Public statements should note grief and loss, but be brief and matter of fact.

THE PROCESS OF PROGRAM EVALUATION

Evaluating the effectiveness of a multifaceted suicide prevention program is a complex task. It requires an analysis of the global effectiveness of the program and the singular impact of each component. Some of this data is difficult to obtain.

From a global perspective, pre- and postintervention data need to be collected on completed suicides and serious suicide attempts. A clear delineation between a life threatening attempt and a less dangerous gesture would be required. Since many suicide attempts are not reported to school officials by families and the causes of some deaths are mislabeled, accurate data is very difficult to obtain. It is also necessary to take into account factors beyond the school team's control (e.g., parental refusal to accept a recommendation for hospitalization).

The effects of individual components of the comprehensive program are easier to measure. Suicidal activity can be tracked in students participating in crisis intervention and support group activities. Pre- and posttesting using standardized depression inventories can measure the impact of depression management groups on depressive thinking and suicidal thoughts (Beck, 1978; Reynolds, 1986). The measure of success for a survivor support group is the successful avoidance of cluster suicides among friends. To date, no students participating in our group program have committed suicide. No other data regarding group effectiveness has been collected. One student completed suicide after crisis intervention attempts, but his family had not followed through on the initial recommendation for outpatient treatment nor a subsequent recommendation for hospitalization.

One goal of this program is to provide service to as many at-risk students as possible. The incidence of participation in the group program and the number of crisis referrals specifically generated by faculty and students after educational presentations are indicators of success in this domain. At the current time our group program includes 4 depression management groups, 2 post-hospitalization groups, 2 eating disorder groups, and 6 substance abuse groups. As one subset of a larger group program, these prevention groups weekly service over 100 students who have demonstrated risk for self-destructive behavior.

To summarize, an evaluation program can investigate both global and individual component effects of a program. The number of students referred because of educational presentations and the number served through the group program can indicate the success of outreach activity.

SUMMARY

This paper reported survey data demonstrating that about one-third of high school students experience suicidal thoughts and almost half of these have hurt themselves when depressed. The incidence of suicidal ideation increases from 9th to 12th grades. No significant differences were found between regular and behaviorally disordered students. A comprehensive suicide prevention program was outlined.

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8

Autism

Differential Effects of Training in Two Classes of Social Initiations on the Positive Responses and Extended Interactions of Preschool-aged Autistic Children and Their Nonhandicapped Peers

Sally Savelle and James J. Fox

ABSTRACT

This study analyzed the social effects of two classes of social initiation on the responses and interactions of two autistic preschoolers. A continuous, sequential observation system assessed the social initiations and interactions between the two autistic subjects and two nonhandicapped peer confederates. Peer confederates were taught to increase each of two classes of initiations, reciprocal (sharing, assisting, organizing play) and nonreciprocal (statements, commands, vocal attention) initiations, during intervention sessions with the autistic subjects. Generalization was measured during developmentally integrated freeplay sessions. Reciprocal initiations were more likely to receive a positive response from both autistic subjects and resulted in more extended interactions for one subject. Little evidence of generalized effects, however, were noted. Implications of these findings for social interaction research and intervention are discussed.

Although autism is characterized by a number of behavioral deficits and excesses, one of its most prominent characteristics is severely impaired social relations (Kauffman, 1985). Indeed, social deficits may be *the* defining characteristic of autism (Schopler & Mesivov, 1986). In any event, one behavioral domain which must be addressed in treating autism is appropriate social relations with other children and adults.

Although researchers have vigorously pursued the analysis of social intervention procedures (for example, see Gaylord-Ross & Haring, 1987; McEvoy & Odom, 1987), there has been relatively less analysis of social interaction skills. Tremblay, Strain, Hendrickson, and Shores (1981) observed 60 nonhandi-

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capped preschoolers during free play to determine which behaviors were most likely to result in a positive response from other children. Certain social initiations — verbally organizing play, sharing toys, assisting another child in play, affections, and rough and tumble play — more often received a positive response from peers than did other types of initiations — statements, commands, vocal attention, and vocal imitation. The former, more effective class of initiations will be termed *reciprocal* initiations, since they produced social responses. The latter, less effective class will be called *nonreciprocal* initiations.

To date there have been no descriptive studies to replicate the findings of Tremblay et al. (1981). On the other hand, the results of intervention studies have supported the social effectiveness of reciprocal initiations. When taught to behavorally disordered and mentally retarded children (Day et al., 1984; Day, Powell, Stowitschek, & Dy-Lin, 1983; Fox, Shores, Lindeman, & Strain, 1986; Hendrickson, Strain, Tremblay, & Shores, 1981) reciprocal initiations have more often resulted in a positive peer response than have the nonreciprocal class. Unfortunately, these results are potentially confounded in that reciprocal initiations have always been deliberately taught, whereas nonreciprocal initiations have not. The extent to which the greater social effects of reciprocal initiations may be due to their association with such teaching operations as praise and reinforcement remains unclear.

This study analyzed the relative effects of reciprocal and nonreciprocal initiations on peers' responses when both classes of initiation were deliberately taught. Also, any further social effects of either class of initiation were analyzed. Hops (1982) speculated that simply increasing initiations would result in brief social exchanges rather than extended interaction. To address this concern, two classes of initiations were analyzed in terms of their likelihood of being followed not only by an immediate response, but also by extended social interaction.

TABLE 1

Subject Characteristics

Test	**Subject 1**	**Subject 2**
CARS[a]	Severely autistic	Severely autistic
Bayley Scale[b]		
Mental age	19 months	19 months
Motor	27 months	(not available)
Vineland ABS[c]	18 months	15 months
REEL[d]		
Expressive language	14 months	13 months
Receptive langauge	11 months	12 months

[a] Childhood Autism Rating Scale (Schopler, Reichter, & Renner, 1986)
[b] Bayley Scale of Infant Mental Development
[c] Vineland Adaptive Behavior Scale
[d] Receptive-Expressive Emergent Language (Bozch & League, 1971)

METHOD

Subjects

Subjects were two 4-year-old autistic boys. Both were enrolled in a university-based early intervention program for autistic children. Classroom teachers reported that both subjects exhibited little peer interaction, were compliant, and had few stereotypic behaviors. Subject characteristics are further delineated in Table 1.

Peer confederates were two 4-year-old boys identified by their teachers as having high rates of positive social interactions with classmates. Both were enrolled in a class for children at-risk for developmental delays, but neither was identified as handicapped. This class was housed in the same preschool program as that of the autistic children. Both had age appropriate receptive and expressive language skills. The confederates were selected by having their teachers rank order all children in the classroom in terms of their frequency of positive interactions with peers. Two other normally developing children from this classroom were also selected using the same rank ordering procedure. These two peers were involved in free play generalization sessions with the peer confederates, the autistic subjects, and their autistic classmates.

Setting

All intervention sessions were conducted in a corner of the autistic students' classroom, measuring 6 ft x 6 ft (1.8 x 1.8 m) and separated from the rest of the room by small chairs. Generalization sessions were in another area of that room, measuring approximately 17 ft x 10 ft (5.2 x 3.1 m). During intervention and generalization two teachers, the first author, and one or two data collectors were present in addition to the six autistic children and the four nonhandicapped peer confederates. Peer confederate training was conducted by the first author in a nearby unoccupied classroom.

Materials

Toys used during all sessions were chosen from those available in the school. These included balls, stuffed animals, a farm set, a work bench set, blocks, a telephone, and an airplane. Toys were held constant throughout the study and across training and generalization settings.

Behavior Categories

All social behaviors emitted to and by the autistic children, three forms of nonsocial play behavior (solitary play, large play equipment, and unoccupied), and two categories of teacher behavior (prompts and reinforcements) were recorded. A listing and brief definitions of these behaviors are shown in Table 2.

Observation Procedures

A sequential, continuous recording system was used to code behaviors. Observers whispered codes into microcassette recorders to record behaviors as they occurred. Each target child was observed for five continuous minutes per session. After each observation, the tapes were replayed and the data entered into a Radio Shack TRS-80 Model 100 Computer. A real-time data entry program, the Behavioral Observation System Computerized (BOSCO), was used to analyze these data (Denny & Fox, 1987).

TABLE 2

Behavior Category Definitions

Behavior	Definition	Example
Play Organizer	A socially directed vocalization in which a child specifies an activity, role, other play, or maintains an ongoing activity	"Let's play workshop"
Share	A socially directed gesture in which a child offers or exchanges an object with the other child	Putting a toy in another child's hand or lap
Assistance	A socially directed verbal or nonverbal behavior in which a child provides or offers help to another child	Helping another child hammer on a toy workset
Statement	A socially directed vocalization in which the vocalization is a neutral declaration	"Your car is red"
Commmand	A child orders or directs another child in order to receive an object, information, or begin or terminate some activity	"Pick up your truck"
Vocal Attention	A verbal statement in which a child attempts to direct the attention of another child to some object or activity in the play area	"See the truck"
Response	Any socially directed vocalization, gesture, or nonverbal acknowledgment which follows within 3 seconds of a preceding initiation	Visually attending, compliance
Interaction	An ongoing positive social exchange between two or more people that does not cease for more than 3 seconds and follows within 3 seconds of a social response	2 children playing together with the same toy
Unoccupied	The suject is not playing with anything and is not interacting with any person for more than 3 seconds	Sitting alone on a chair
Solitary	The subject is manipulating or holding a toy or manipulating an object for more than 3 seconds	Holding a doll or throwing leaves in the air

Observer Agreement

Two observers independently and simultaneously recorded target behaviors during the sessions. Reliability was calculated as agreements divided by agreements plus disagreements times 100. To score an agreement both observers had to record the same behavior in the same sequence and within the same 10-second window of time. Agreement was assessed for 75% of the sessions. Agreement data are shown in Table 3.

TABLE 3

Interobserver Agreement

	Initiations	Responses	Interactions	Solitary Play	Unoccupied Range
MEAN	81%	72%	89%	94%	94%
RANGE	64-100%	0-100%	0-100%	50-100%	0-100%

Intervention Procedures

Baseline. To begin each session the two autistic subjects and two confederates were brought to the intervention area and told once by the teacher, "It's time to play." Observation then began.

Peer confederate training. Peer confederates were taught to emit target social initiations durng special training sessions. Training was adapted from that described by Hendrickson et al. (1981) and Day, Powell, and Stowitschek (1980). It consisted of simplified definitions, examples of each target initiation, and role playing. During role playing the trainer (first author) acted as the autistic child, and the peer confederates practiced initiating target behaviors to her. Training for the reciprocal and nonreciprocal intervention conditions was the same with the exception of the type of initiations targeted for training. Two initial 15-minute training sessions occurred between the end of baseline and the onset of intervention. Thereafter, a 5- to 10-minute training session was conducted with the peers each day prior to intervention sessions.

Increased peer initiations. Two peer initiation conditions were applied to each subject. In one condition confederates emitted *reciprocal* initiations identified by Tremblay et al. (1981; i.e, Play Orgnaizer, Share, and Assistance). In the second condition the confederates emitted *nonreciprocal* initiations (i.e., Statement, Vocal Attention, and Command). If a social behavior had not occurred in the preceding 30 seconds, the experimenter prompted the confederate to emit the specified type of initiation. Peer confederates were told to emit at least one of each type of initiation from the target class for a particular day. As in baseline, intervention began with the experimenter telling the peer confederate-autistic subject dyad, "It's time to play." After each session the experimenter gave general praise and feedback to the peer confederate, telling him that he cooperated well during the sessions and/or giving corrective feedback on any incorrect initiations made during the session.

Generalization. Immediately following intervention sessons, each target child was observed for an additional 5 minutes in freeplay. Present in these sessions were the autistic subjects, their autistic classmates, the two peer confederates, and two other nonhandicapped children from the confederates' class. Children were again told, "It's time to play" and were allowed to play as they wished. Teachers intervened only to correct inappropriate behaviors (e.g., if a child were climbing on a table or running in the room).

Design

A randomization design (Kazdin, 1982) with simultaneous replication across two subjects was used to investigate the differential effects of the two classes of social initiations. Reciprocal and nonreciprocal initiations were applied on separate days according to a randomly determined schedule.

RESULTS

Intervention Setting

Peer confederates' initiations. Figure 1 shows the frequency of the two classes of target initiations emitted by the confederate to Subject 1. Relative to baseline, both classes of initiations increased following peer confederate training and were emitted at about the same frequency. Thus, Subject 1 had equal opportunity to respond to each class of initiation. Similar data are shown for peer confederate initiations to Subject 2 in Figure 2.

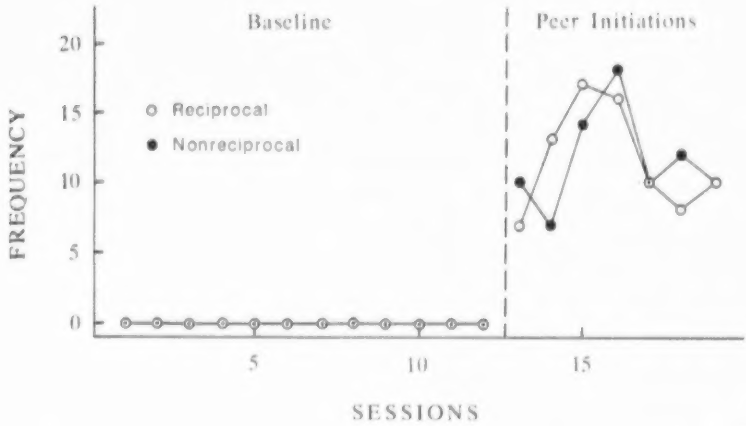

Figure 1. *Frequency of peer confederate initiations to Subject 1 in the intervention setting*

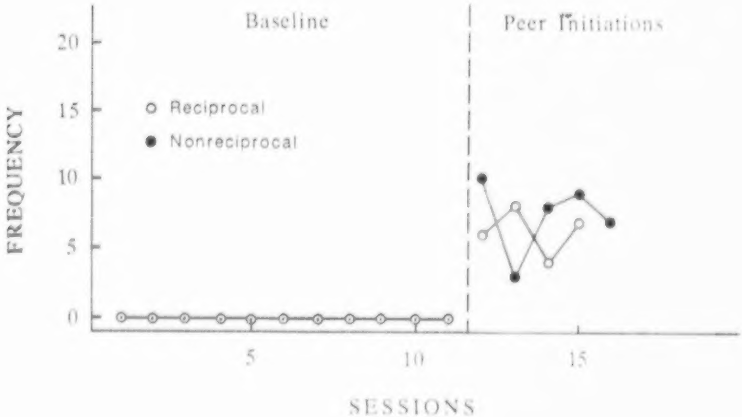

Figure 2. *Frequency of peer confederate initiations to Subject 2 in the intervention setting*

Figure 3 shows the frequency of Subject 1ús positive responses to peer confederate target initiations during intervention. Although both types of initiation occurred at comparable frequencies, Subject 1 responded at a much higher frequency to reciprocal than to nonreciprocal initiations. Overall, 75% of the confederate's reciprocal initiations received a positive response, as opposed to 17% of nonreciprocal initiations.

Figure 4 shows Subject 2's responses to the peer's initiations. With the exception of day 8, Subject 2 responded at a higher frequency to reciprocal initiations than to nonreciprocal initiations; 61% of reciprocal, as opposed to

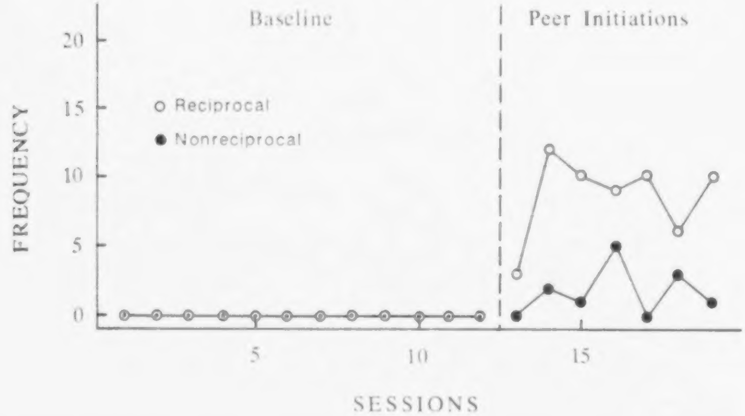

Figure 3. *Frequency of Subject 1's positive responses to the peer confederate's initiations in the intervention setting*

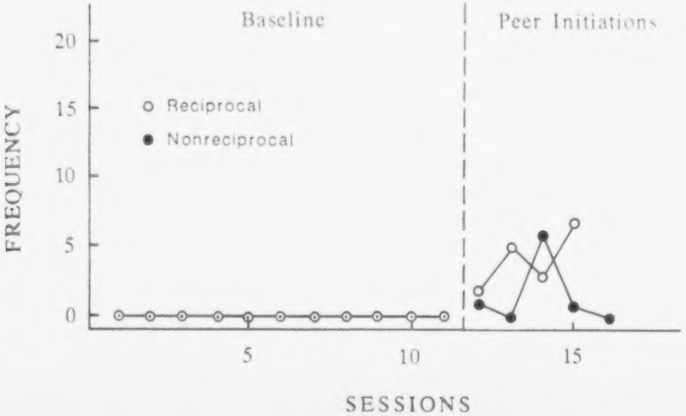

Figure 4. *Frequency of Subject 2's positive responses to the peer confederate's initiations in the intervention setting*

12% of nonreciprocal, initiations received a positive response from Subject 2.

Subjects' own initiations were infrequent with no difference between the two conditions.

Interactions. Figure 5 shows the total time spent in positive interaction between Subject 1 and the peer confederate during intervention sessions. None of the confederate's nonreciprocal initiations were followed by extended interactions, whereas there was an increasing trend in the amount of interaction following reciprocal initiations. Figure 6 shows Subject 2 interactions. There was considerable variability in interaction following the two classes of initiation.

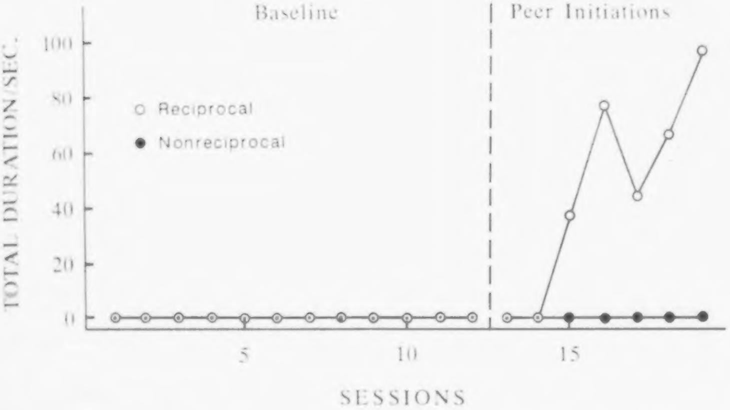

Figure 5. *Total duration in seconds of interaction in Dyad 1 (Subject 1 — Peer Confederate 1) in the intervention setting*

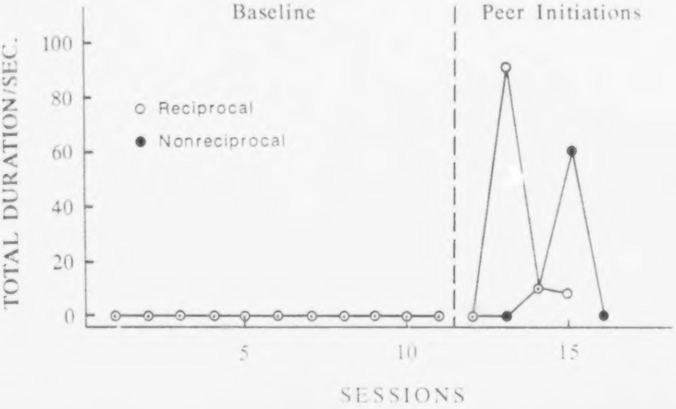

Figure 6. *Total duration in seconds of interaction in Dyad 2 (Subject 2 — Peer Confederate 2) in the intervention setting*

No clear association between the class of initiation and time spent in interaction was evident for Subject 2.

Nonsocial behaviors. Table 4 shows the percentage of time that Subjects 1 and 2 spent in unoccupied and solitary behavior in the intervention setting. Both behaviors were quite variable throughout the study. Unoccupied behavior decreased substantially during the confederate initiation conditions; however, there was no consistent difference between reciprocal and nonreciprocal conditions. The mean percentage of solitary play increased from baseline to intervention and was less variable during reciprocal than during nonreciprocal intervention conditions.

TABLE 4

Percentage of Time Spent in Unoccupied and Solitary Play in the Intervention Setting

	Unoccupied			**Solitary**		
	Base.	**Recip.**	**Nonrec.**	**Base.**	**Recip.**	**Nonrec.**
Subject 1	54% (0-95%)	10% (0-33%)	9% (0-28%)	34% (0-97%)	50% (36-65%)	58% (0-80%)
Subject 2	29% (0-84%)	3% (0-9%)	9% (0-21%)	48% (0-100%)	64% (53-73%)	43% (29-58%)

Free Play Generalization Sessions

Once peer initiations had been increased in the intervention setting, Subject 1 and his peer confederate briefly initiated to each other during free play. Subject 1 positively responded to 80% of the peer's initiations and the confederate to 60% of Subject 1's initiations. In contrast, there were sporadic initiations by and to Subject 2 throughout generalization sessions, yet no consistent change occurred in their frequency. There was no consistent change in either unoccupied or solitary play behavior during generalization.

DISCUSSION

When nonhandicapped peers were taught to increase each of two classes of social initiation, reciprocal initiations more often resulted in a positive response from the autistic subjects than did nonreciprocal initiations. Also, for the first dyad, reciprocal initiations were more likely to result in a greater amount of extended, positive interaction. These results replicate and extend those of previous descriptive (Strain, 1983; Tremblay et al., 1981) and intervention studies (Day et al., 1983; Day et al, 1984; Fox et al., 1986; Hendrickson et al., 1981) showing the greater social effectiveness of reciprocal initiations. Finally, once initiations and interactions increased, both subjects spent less time in unoccupied behavior and more time in productive solitary play.

The increases in extended interactions seem especially notable. Although the *differential effects* of reciprocal initiations on extended interactions were not replicated with the second subject, both subjects' interactions *did increase* as peer initiations increased. The amount of interaction is an important measure of social development (Greenwood, Todd, Hops, & Walker, 1982; Walker, Greenwood, Hops, & Todd, 1979). It has been aruged (Hops, 1982) and in some cases empirically demonstrated (Greenwood et al., 1982; Walker et al., 1979) that increasing specific initiations, rather than extended interactions, produces superficial child-child exchanges with little sustained interaction. However, specific pinpoints were targeted in the current study, yet both subjects' peer interactions increased during intervention. Similar results have been obtained in other studies from our laboratory (Brady et al., 1984; Day et al., 1983; Fox et al., 1984; Fox et al., 1986; Gunter, Fox, Brady, Shores, & Cavanaugh, in press). Perhaps the difference between our results and those of others lies in the particular behavioral targets selected.

Despite the positive outcomes of this study, several questions remain. During intervention peer initiations and interaction increased, but subjects' initiations to peers did not. Although others have reported concurrent increases in autistic and other behaviorally handicapped children's initiations as a result of increased peer initiations (e.g., Brady, Shores, McEvoy, Fox, & Ellis, 1987; Odom & Strain, 1985; Strain & Timm, 1974; Walker & Hops, 1973), the present results suggest that this is not an inevitable by-product of peer-mediated interventions. One reason for this study's lack of subject initiations may be the subjects' limited expressive language. For these and similar children to more fully benefit from social interventions, other nonverbal initiations may need to be taught. Also, a longer period of intervention might have more clearly affected subjects' own initiations. Finally, there was little spontaneous generalization of initiations to free play. Thus, in clinical efforts to improve the social development of severely withdrawn children, it is advisable to directly teach social skills and to implement generalization programing tactics (McConnell, 1987; Shores, 1987) to ensure broader, more comprehensive behavioral change.

It is unclear why the *differential* effects of the reciprocal and nonreciprocal initiations on sustained interaction were not replicated for the second peer-subject dyad. Although the longest interaction in the second dyad occurred during a reciprocal initiation session, interactions were generally shorter and more variable in this dyad than in the first. Perhaps intervention for Subject 2 was too brief for interactions to be differentially affected by the two classes of initiation. There were fewer intervention sessions for the second than the first dyad. Unfortunately, we were unable to conduct additional sessions with Subject 2 due to his absences and time constraints. Alternatively, reciprocal initiations may not be equally effective for all children or situations. Further analyses are needed to determine if increasing the number of intervention sessions would result in clearer differences in interaction.

Identifying desirable forms of interaction is integral to future success in social behavior research and training with behaviorally disordered children and youth. Though much remains to be learned about the interactional process, the current results enable a better understanding of critical interaction skills for autistic and other socially withdrawn children.

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Facilitating Communicative Competence as a Basis for Developing Conventional Behaviors in Students with Autism and Severe Behavioral Disorders

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ABSTRACT

Recent literature has generated reflection on the current approaches towards programing for students with autism and severe behavioral disorders. Attention has been given to the communicative function of behaviors considered aberrant, the role of choice, and the need for student initiation in the classroom. In response to these new directions in programing and in view of recent research on communicative competence, the authors explore the application of a facilitative framework to working with students with autism and severe behavioral disorders. In this article, the development of this framework from current practice will be discussed. After presenting the framework, the major tenets of this perceptual basis are presented. The article concludes with some examples of implementing the framework, and questions of research and practice which are emerging.

The emerging commitment to nonintrusive interventions for students with autism and severe behavioral disorders has contributed to a rethinking of current practice. Increased attention has been given to strategies for using positive programing and addressing the communicative function of behaviors deemed aberrant (LaVigna & Donnellan, 1986). The issue of choice and classroom climate have emerged in programing for students (Houghton, Bronicki, & Guess, 1987; Peck, 1985). In response to these new directions in programing and in view of recent research on communicative competence, the authors have begun to explore the application of a facilitative framework to working with students with autism and severe behavioral disorders. In this article, the development of this framework from current practice will be discussed. After presenting an overview of the framework, the major tenets of this perspective are presented. The article concludes with some examples of implementing the framework, and questions of research and practice which are emerging.

Rethinking Current Practice

Donnellan and Kilman (1986) suggest three basic approaches to current practice in program development with students with autism and severe behavioral disorders: behavioral, functional, and developmental. The most common of these approaches is behavioral. According to this approach, as described by Donnellan and Kilman, students with autism demonstrate behaviors which are appropriate or inappropriate, and which can be increased or decreased through specific technology. The teacher's role is to organize and structure learning tasks and contingencies to maximize learning. Strengths of this framework include its commitment to accountability, the specificity of responses delineated, and the use of a powerful teaching technology to work with students.

There are, however, several limitations to the behavioral framework. Donnellan and Kilman indicate that these concerns include the rigid stimulus control and artificiality, the teacher-directed nature of activities, and the emphasis on consequences, artificial reinforcers, and punishers. The behavioral framework may be applied to eliminate behavior without regard to the function of that behavior. In response to these limitations, current literature has explored decreasing the preempting nature of classroom environments (Halle, 1984), the role of classroom climate and student decision making (Peck, 1985), and the analysis of communicative functions of aberrant behavior (Donnellan, Mirenda, Mesaros, & Fassbender, 1984).

The second approach to program development described by Donnellan and Kilman (1986) is functional. In describing priorities for the student's programing, the person's ultimate functioning is considered. Instruction is provided on tasks which relate to the individual's independent functioning. One difficulty with this approach, however, is that functional tasks may be outside of the student's conceptual knowledge. In addition, this approach describes what to teach, rather than how to teach. Instruction is usually provided within a behavioral framework.

The third approach which Donnellan and Kilman (1986) describe is developmental. They indicate that this approach provides a means of discovering what the student knows, the proximity of that knowledge to the knowledge needed, and insight into the manner in which the material is learned by other children. Donnellan and Kilman, however, imply that the developmental approach may lead to never being able to have an opportunity to participate in some activities in that the individual is "not ready."

The developmental approach to programing for students with autism and severe behavioral handicaps has recently gained greater support. Prizant and Wetherby (in press) contend "that educators and clinicians can be most effective in enhancing language and communicative ability by judiciously applying knowledge of normal communication development based on the recent and emerging theoretical/research literature" (p. 13). Carr and Durand (1985) suggest that the long term successful remediation of behavior problems may be best pursued within the conceptual framework of developmental psychology.

In concluding their review of these three approaches, Donnellan and Kilman (1986) suggest a low inference approach that chooses developmentally relevant tasks and sound technology. Instruction, they maintain, should occur in the natural setting, which reflects the ultimate functioning needs of the student. In response to this suggestion, we propose a facilitative framework for working with students with autism and severe behavioral disorders.

The Facilitative Framework — An Overview

Carr and Durand (1985) comment that the teacher's major role is to facilitate the development of social and communicative skills in their students. The framework the authors propose suggests that through facilitating communicative competence through developmentally appropriate activities, interactions become more conventional, and generalization occurs as part of the developmental process. This framework satisfies Donnellan and Kilman's (1986) criteria for an approach that chooses developmentally relevant tasks, employs sound technology, and takes place in natural settings. It is responsive to the current trends in programing to reduce intrusion, increase student choice, and reduce the preempting nature of classrooms.

There are five basic premises of the facilitative framework which separate it from other current approaches. First, it involves an emphasis on facilitation rather than intervention. Rather than seeking to develop appropriate behaviors, the goal of the framework is to facilitate the development of communicative competence. Behaviors are not judged to be appropriate or inappropriate, but are perceived as less conventional. Unlike the current trend to examine the function of behaviors, we are beginning to explore the concept of intent. Finally, the framework supports the teacher's professional ability to make inferences from students' actions. What follows is a discussion of the five premises of the facilitative framework.

Facilitation versus intervention. The first premise of the emerging framework is the focus on facilitation versus intervention. This need for an emphasis on facilitation rather than direct intervention has emerged from the literature in communication development and pragmatics. In viewing intervention, Snow, Midkiff-Borunda, Small, and Proctor (1984) suggest that the child with language delays, who may actually need more language interaction, may receive significantly less because of the delays. In addition, communicating in an interactional setting plays a major role in providing opportunities for the child to discover the rules of language (Sachs, Bard, & Johnson, 1981). This information calls into question the controlled stimulus-response intervention strategies implicit in the behavioral framework.

Doyle (1986) indicates that by their very nature, interventions are reactive. In discussing classroom order, he maintains that interventions can repair temporary disturbances but cannot establish order when no primary vector (i.e., an overriding direction or drive) is operating. Rather than using reactive interventions, the authors suggest putting facilitation in place as the primary vector. Rather than reacting to specific behaviors, the overall communicative development of each child is facilitated. The intervention model, described by Prizant and Wetherby (1987) as a "passive child/active environment" model, implies that the teacher determines what is to be learned in what way, and which behaviors or responses are judged to be acceptable or unacceptable. Prizant and Wetherby contend that this intervention model often results in the training of compliance, and a lack of initiation, cue dependency, and problems in generalization on the part of the students.

In the facilitative framework, children are active participants who learn to affect the behaviors of others through active signaling, gradually using more sophisticated and conventional means to communicate (Prizant & Wetherby, 1987). Positive teacher-student relationships are essential in this framework, increasing the student's desire to communicate (Seibert & Oller, 1981). Hubbell (1977) suggests that in the facilitative model, teachers more carefully monitor students' responses, and are in this way better able to provide input for the students more congruent with the students' current interests and behaviors. Rather than reacting and managing, the facilitative teacher increases student activity and control over the learning environment.

Communicative versus behavioral competence. Implicit in the facilitative framework is a second major premise: the goal of communicative rather than behavioral or social competence. Shultz, Florio, and Erickson (1982) define communicative competence as "all the kinds of communicative knowledge that individual members of a cultural group need to possess to be able to interact with one another in ways that are both socially appropriate and strategically effective" (p. 89). The relationship between communicative development and behavior is further supported by Carr and Durand (1985) who maintain that behavior problems are communicative in nature, and that programs which stress broad communication training could have the effect of reducing behaviors perceived as problems.

Programing for communicative competence implies that communication is an integrated composite of social and individual factors such as attitudes, behaviors, interactions, social roles, and cognitive ability (Rice, 1986). This composite is supported by studies focusing on enhancing students' communication. Beisler and Tsai (1983) found that when language programing used natural conversational exchanges and a reinforcement system which consisted of responding to the intent of the student's communication, interfering behaviors such as poor eye contact and tantrums did not occur. They hypothesized that several factors contributed to the students' appropriate behaviors: (a) child-oriented activities which held the child's interest; (b) natural consequences which made sense to the student and were sufficient to maintain positive behaviors; and (c) task and language which were appropriate to the student's development level. These findings suggest that through facilitating communicative competence rather than intervening on inappropriate behaviors, more successful and productive programing may occur.

Current directions in behavioral interventions has included the assessment of functions of behaviors, leading to interventions which focus on the training of specific behavior (Carr & Durand, 1985; Donnellan et al., 1984). However, these studies do not assess communicative competence on the whole. Yet Prizant and Wetherby (1987) contend that through facilitating communication, behaviors may be replaced by or modified to more socially acceptable, developmentally appropriate behaviors that serve the same functions. The interactional, facilitative framework which the authors suggest is responsive to Prizant and Wetherby's contention that "conventional communication develops through interaction with and observation of others and ultimately plays a major role in the child's developing social competence" (p. 477).

Less conventional versus aberrant or inappropriate behaviors. The third premise of the facilitative framework suggests that behaviors should be viewed along a continuum of conventionality rather than be considered as appropriate or inappropriate. Prizant and Wetherby (1987) define conventionality in communicative signaling as the "degree to which the meaning of signals is shared or understood by the social community" (p. 474). This definition of conventionality is consistent with the definition of communicative competence described earlier, that of interaction with others in ways that are both socially appropriate and strategically effective. In choosing to use the term *less conventional* rather than inappropriate or aberrant, we are addressing several points. First, the value judgments and teacher tolerance involved in describing behaviors as aberrant or inappropriate is decreased, in that a student's communication is viewed in terms of comprehension and sharing by the community in which the student interacts. Second, less conventional recognizes the communicative strength of such actions. Carr and Durand (1985) state that:

> Ultimately we must consider the possibility that the long-term treatment

> of behavior problems may require a conceptualization that differs from the current view that behavior problems are aberrant and maladaptive. Our discussion . . . suggests that in many instances behavior problems may be usefully reconceptualized as communicative. That is, we are proposing that these behaviors be viewed as adaptive and functional. Specifically, they help children whose communicative skills are poor to influence important aspects of the social situation. (pp. 248-249)

We contend that conventionality may exist along a continuum. As students develop, they move along the continuum, using more strategically effective, understandable, and shared signals. We are hesitant to describe behaviors as unconventional in that we feel it may be rare that no one understands the signal. Signals used by students with autism and severe behavioral disorders may be idiosyncratic, that is, personally unique, but the use of the term unconventional seems too absolute.

Intent versus function. The fourth premise of the proposed framework is the consideration of communicative intent. Hypothesizing about the communicative function of behaviors and employing positive programing, as suggested by Donnellan et al. (1984) and Carr and Durand (1985), differs from attempting to determine the intent of the behavior. Intent implies that the student is seeking a goal which may or may not be equivalent to the function of the behavior. In addition to hypothesizing about the function of the behavior, we contend that hypotheses must also be developed concerning the student's intent.

Bates (1979) contends that the onset of communicative intentions and conventional signals are continguous. She defines intentional communication as "signal behavior in which the sender is aware a priori of the effect the signal will have on her/his listener, and s/he persists in that behavior until the effect is obtained or failure clearly indicated" (p. 36). Conventional communication, she contends, is a by-product of the fact that the child intends for her/his signal to have a communicative effect. By considering intent, the persistence of actions in some students with autism or severe behavioral handicaps becomes clearer. This persistence (or, as it is interpreted by some observers, perseveration) may occur because the intent or goal of the communication is not met. For example, a student may demonstrate some self-injurious behavior, such as striking her/his face. The student's intent may be to get assistance from an adult because of a headache. Though the function of the behavior may be to terminate the activity, the student's intent is not met, so the student persists in striking her/his face.

Recognizing the student's intent, then, differs from recognizing the function of the behavior. Intent has been inferred in infant-mother interactions through alterations in eye contact between the goal and the intended listener; augmentation, additions, and substitutions of symbols until the goal has been obtained; and changes in the form of the signal (either abbreviated and/or exaggerated patterns) that are appropriate for achieving the goal (Bates, 1979). The authors contend that it is possible to infer intent from the behaviors demonstrated by students with autism and severe behavioral handicaps, and such inferences impact greatly on those students' programing.

The role of inference. The final premise of the facilitative framework is the critical role of inference. Our perspective on the role of inference in working with students with autism and severe behavioral handicaps is derived essentially from ethnographic research on classroom interactions. Erickson (1986) suggests that in education, linear-causal models are problematic in that they only consider the observer's judgment of the meaning of the behavior rather than the student's definition of meaning. A different view emerges if you consider that "humans . . . create meaningful interpretations of the physical and behavioral objects that surround them in the environment. We take action toward the objects that surround us in the light of our interpretations of meaningfulness" (Erickson, 1986, p. 126).

Inference, then, is not unique to the facilitative framework which the authors suggest. Rather, any interaction involves persons taking action on the grounds of interpretations of the actions of others (Erickson, 1986). Inference is also involved in specific definitions employed by proponents of a behavioral perspective. For example, observers may define behaviors such as eyes on paper, grasping pencil, and making marks on a paper as "on task" when, in fact, the student may not be engaged in the activity targeted for observation.

In our development of a facilitative framework, we are not interested in viewing *behaviors* or physical acts, but rather the focus is on *actions* which involve the physical behavior plus the meaning interpretations held by the actor and those with whom the actor is engaged in interaction (as Erickson suggests). We are not discussing behaviors, but are involved in examining interactions among students and their teachers (and interactions among students). The facilitative framework suggests patterns to these interactions which will assist in its implementation.

Implementing the Framework

As stated earlier, a primary goal of the proposed facilitative framework for working with students with autism and severe behavioral disorders is an emphasis on the development of communicative competence. The goal is not to hypothesize about the function of behavior and train a more appropriate substitute for that behavior. Instead, the goal is to facilitate a greater diversity of intent and to move students along the continuum of conventionality. Mirenda and Donnellan (1986) provide several descriptors of facilitative teachers in their study of adult interaction style. Facilitative teachers initiate less than a third of all topics of discussion or conversations. Rather than using direct questions, facilitative teachers use indirect statements. Facilitative teachers use statements, encouragements, and echo or expand questions and statements to continue conversations with students. Teachers who facilitate communication ask for clarification, and allow up to 30 seconds between student initiations.

In our observations of facilitative teachers, several patterns have emerged, consistent with the work of Snyder-McLean, Solomonson, McLean, and Sacks (1984). The teachers wait — sometimes for several minutes — for students to initiate appropriate interactions. The teachers portray an expectancy of communication, described by one teacher as her "tell me more — I'm listening" look. Teachers put the students in control of their own behavior, using carrier phrases such as "the rules in this room are" and "you are choosing to."

Perhaps the most important role described by each of the facilitative teachers with whom we work is that of interpreter/reconstructer of classroom events. In this role, teachers accept responsibility for their role in the interaction. For example, when one teacher's students fail to respond appropriately to her direction, she clarifies, stating "Let me explain this better." If a student gives only partially recognizable responses, the teacher repeats what she feels is the student's response as a clarifier; if the student models the teacher's clarification, the teacher continues by expanding in a conversational way. These examples of interactions illustrate initial strategies for facilitating communicative competence.

Emerging Questions and Issues

Several issues have emerged through our exploration of the facilitative framework. These questions will require further research and careful examination of facilitative teachers. First, instructional objectives have taken a dramatic shift. Facilitative teachers are tolerant of emerging behavior which may be more conventional but still not quite socially appropriate. Through exploiting those emerging behaviors, teachers may assist students in moving along the continuum of conventionality. In addition, the facilitative framework recognizes that teachers need an extensive knowledge of development to recognize the general movement of each student along the continuum.

The facilitative framework is further complicated by its recognition of the role of the context. As LaVigna and Donnellan (1986) suggest, an analysis of the antecedents-behavior-consequences is insufficient. Communicative intent can only be inferred by observing interactions across situational contexts. Furthermore, an analysis of the contexts in which the student interacts must be ongoing. This may be difficult for teachers who have focused primarily on behaviors in specific situations rather than examining student-teacher and student-student interactions in a variety of contexts.

Finally, the facilitative framework recognizes that current approaches to program development for students with autism and severe behavioral handicaps utilize powerful technology. However, the facilitative framework accepts that inference is essential in any interactional activity such as teaching. These issues require further investigation, especially with regard to preparing teachers to apply this framework. Teachers who apply this framework will assist students in becoming more communicatively competent, that is, more capable of interacting with others in ways which are socially appropriate and successful.

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8

Adolescents and Young Adults

Handicapped Youth and Young Adults in Prison: Forgotten Clients in Search of Assistance

Osa D. Coffey

ABSTRACT

This article discusses the problems encountered by handicapped individuals — especially those suffering from mental retardation — at all stages of the criminal justice system and most acutely while incarcerated in an adult prison. The needs of handicapped youth, in terms of correctional special education and related services, are defined. The importance of special education professionals becoming more involved with handicapped offenders is discussed. And finally, specific areas in which their expertise is needed to facilitate better and more appropriate treatment of handicapped offenders at all stages of the criminal justice process, from arrest through court proceedings, probation, incarceration, and/or parole are identified.

Dostoevsky once said that to gauge a society's degree of civilization one should take a look at its prisons. This is not a comfortable thought for Americans. To judge from our current prisons and jails — dilapidated, overcrowded, human warehouses offering little but advanced schooling in crime and violence — our degree of civilization is not very high. If one would look at the treatment of the handicapped in our prisons — the mentally ill, the mentally retarded, the learning disabled, and the emotionally disturbed — we would seem to be in the Dark Ages.

During the last decade and a half, the United States experienced a wave of crime, increased fear of crime by the public, and a consequent shift in correctional philosophy from faith in rehabilitation in the 60s and early 70s to concentration on punishment and incapacitation of offenders in the late 70s and early 80s, giving them, as the jargon goes, "their just deserts." In this punitive spirit, many states increased the length and severity of sentencing, abolished parole or made it harder to get, and reintroduced capital punishment. The result has been a massive influx of persons into correctional institutions, which currently run at more than 100% of capacity. Without providing adequate opportunities for education or productive work, these overcrowded correctional facilities are schools of crime, characterized by idleness and violence.

The United States currently has the highest incarceration rate (approximately 250 per 100,000 population) of any country in the world except the Soviet Union and South Africa (Doleschal & Newton, 1981). On an average day, there are more than half a million inmates in adult prisons, 2,000 of them on death row, an additional 300,000 in local jails, and another 78,000 youngsters in juvenile institutions (American Correctional Association, 1987). The prison population keeps growing at approximately 12% every year. Despite massive prison construction, local, state, and federal agencies cannot keep up with the increase. The conditions of confinement have become so appalling that 38 states currently are involved in litigation charging serious violations of the 8th Amendment of the United States Constitution, which prohibits "cruel and unusual punishment."

Horace Mann, that great American educator of the last century, once said, "Jails and prisons are an alternative to good education." Today, the educational system in this country has been one of the problems that have led to today's situation in the criminal justice system. Many offenders not only failed in the U.S. public school system, but the system also failed them. They are part of the terrible costs of the last decades of American public education which *A Nation at Risk* (National Commission on Excellence, 1983) so aptly described as "the act of unthinking, unilateral educational disarmament."

The typical inmate, male as well as female, adult as well as juvenile, is poor, undereducated, unskilled, and unemployable. Most dropped out of school after having been "socially promoted" for years, without many attempts on the part of school authorities to provide special, remedial, or alternative education to meet their special needs and problems. As a result, prison inmates exhibit 20 times the illiteracy rate of the population at large and 8 times the unemployment rate. Most inmates function at about the 6th grade level (Coffey & Carter, 1986). Statistical research also indicates a clear relationship between educational level and crime. A person without any formal education is 25 times more likely to commit a crime than a person with a high school diploma. A high school dropout is 6 times more likely to break the law than someone who graduated (Bureau of Justice Statistics, 1983b).

The handicapped are also grossly over-represented in corrections. A recent study of incidence of handicapping conditions among inmates under the age of 21 found that 35.6% suffer from diagnosable learning disabilities and 16% from mental retardation (Keilitz, 1987). Since the typical inmate is about 25 years old, there is little reason to believe that these incidence figures do not apply to most of the adult inmate population as well. If so, they translate into almost 219,000 learning disabled in our prisons and juvenile facilities, and 96,000 suffering from mental retardation. Drug and alcohol abuse have further aggravated these problems. One third of all inmates were under the influence of drugs at the time they committed a crime, another third under the influence of alcohol (Bureau of Justice Statistics, 1983a). One can only guess at the extent of permanent brain damage from such abuse among the inmate population.

Eventually released back into the community is 95% of the prison population. So it is in society's best interests to care about whether they are prepared to return as independent, law-abiding citizens. Unless they obtain further academic, vocational, living skills, and pre-employment training, typical American offenders are unemployable upon release from a correctional institution. Their chances of going straight are virtually nil. Currently, offenders recidivate at a rate of approximately 50% (Bureau of Justice Statistics, 1985). Inability to gain and keep employment is a major contributing factor, as is the lack of functional living and social skills. Research indicates that employment upon release with a livable wage can and does reduce recidivism among ex-offenders (Rossi, Berk, & Lenihan, 1980). Further efforts, however, are needed to make the typical offender employment-ready.

John Conrad (1982) once pointed out that the most distinguishing trait of correctional education today is the gap between inmates' educational needs and available services. This is certainly true as indicated by the fact that approximately 75% of the adult prison population is in need of basic and vocational education, and only 25% are currently enrolled in programs (Coffey & Carter, 1986).

Handicapped inmates are the greatest victims of neglect. Few adult prison systems have any special education programs; even fewer — probably none — are in full compliance with Public Law 94-142, despite the fact that there are thousands of handicapped inmates under age 22 sentenced to adult prisons. Many prison officials have expressed a dire need for services for their mentally retarded, mentally ill, or dually diagnosed inmates. Yet, very few jurisdictions have specialized living and treatment programs for these groups.

Society pays the price for this neglect. Currently, one out of every three households are victimized by either violent or property crime every year, mostly by repeat offenders (Bureau of Justice Statistics, 1984). And next to defense, education, and social security, we pay more for the criminal justice system than for anything else in our society: about $16,000 per adult inmate per year and about $30,000 per juvenile per year. The operating budget for adult and juvenile correctional facilities in the 50 states and the federal correctional system exceeded 10 billion dollars in fiscal year 1986 (American Correctional Association, 1987). Less than 1% of this amount was expended on correctional education programs.

If left to correctional agencies alone, no great progress in correctional education can be expected. Burdened by the problems of overcrowding, litigation, capital improvements, and construction, even the most education- and treatment-oriented correctional administrators are by necessity concentrating on other urgent priorities. Furthermore, the lack of functional skills among offenders is part of a greater national *educational* crisis. It should be accepted as such, and the solutions must be jointly found and implemented by the correctional and educational communities. Correctional education must become part of a serious national, state, and local effort to eradicate illiteracy and provide all Americans with functional and marketable skills.

Special education must play an increased role in correctional education in the future. It can do so if the special education professional community shoulders more of the responsibility, picks up the challenge, and plays more of an advisory as well as a leadership role.

THE HANDICAPPED IN THE CRIMINAL JUSTICE SYSTEM

At every stage of the criminal justice process, handicapped offenders currently experience more than the usual problems. At every stage of this process, there is a crucial role for the special educator. The handicapped in the criminal justice system are distinguished primarily by two things: (a) They have greater needs for assistance at every point of the total process from the moment of arrest through court proceedings, probation or incarceration, parole, release, and after care; and (b) they usually fare worse at every stage. This is particularly true in terms of the adult mentally retarded, but also applies to many who are learning disabled, mentally ill, or emotionally disturbed.

First, they are more likely to get caught in the act and arrested, frequently escalating the situation by strange or panicky behavior that can be interpreted by law enforcement personnel as attempts to resist arrest. Without training, police officers are unlikely to identify the mentally retarded as such or know how to deal with them. Communication becomes a serious problem. Since mentally retarded offenders are unlikely to understand their rights (e.g., the Miranda warning or the right to counsel) they frequently waive their rights, fail to get bail or release on their own recognizance, and end up in jail during the pretrial and presentencing period.

During court proceedings, the developmentally disabled usually are inept in assisting in their own case preparation and frequently make self-incriminating statements. As a result, they are more likely than their nonhandicapped peers to stand trial, be found guilty, and be sentenced to prison.

Worst of all for them is incarceration in jail and/or prison. They are frequently victimized by other inmates. Having a difficult time understanding institutional rules, they commit frequent infractions and spend much time in disciplinary segregation. They seldom have access to the academic, vocational, and prison industry programs that may help them gain skills before release. Having more infractions, less to show in terms of self-improvement through programs, and communicating poorly, they fare badly before parole boards. As a result, they frequently serve more of their sentences before release than their nonhandicapped peers. The developmentally disabled also have more adjustment problems after release. Having poor skills, little work experience, and no support networks, they recidivate more often and sooner than other ex-offenders (McDonald & Beresford, 1984).

The situation is currently bleak for most of the developmentally disabled who come in contact with the criminal justice system. However, with additional assistance from mental health, mental retardation, and special education professionals, these conditions can change. Examples of legislative initiatives, diversion programs, cooperative agreements, and training that have wrought significant improvements for the handicapped at the various stages of the criminal justice system already exist. These can be expanded through further involvement of persons trained in various aspects of special education and related service delivery.

WHAT CAN SPECIAL EDUCATORS DO?

The need for the services of special educators is great at every point of the criminal justice system. However, there are three broad areas in particular that should be targeted as priorities.

1. At the presentencing stage, special educators are needed to assist criminal justice personnel in developing alternatives to incarceration, especially for nonviolent first offenders and those with more severe handicaps. Appropriate programs and adequate supervision in the community can better serve the needs of these offenders while ensuring that society is protected and justice has been done. Unless these arrangements can be worked out, judges have little choice but to impose sentences for incarceration. The development of alternatives frequently depends on close cooperation among criminal justice, special education, and mental health personnel as well as a number of different agencies. Such cooperation has been insufficient to date.

2. Greater involvement of special education and mental health/retardation professionals is also needed at the incarceration stage to ensure that imprisonment of this population will not lead to victimization or absence of needed habilitation services. These professionals need to take the lead in the development and implementation of appropriate programs and services, in providing

training for correctional staff, and in safeguarding the rights of handicapped inmates under state and federal law.

3. At the postincarceration stage, these professionals are needed to assist in the development of appropriate transition and follow-up services for released offenders, the creation of appropriate referral systems and linkages among service providers and agencies, and the training and support of parole staff.

In generic terms, there are four areas that the special education community should target for expanded action: training, program development and monitoring, research and evaluation, and advocacy.

Training

Many of the problems encountered by handicapped offenders in the criminal justice system are due to the ignorance of criminal justice staff in terms of how to detect and deal with handicapping conditions such as mental retardation and learning disabilities, conditions which are not easily identifiable by the untrained. Law enforcement, court, jail, and corrections personnel who come in contact with the handicapped need to be trained, at a minimum, in how to suspect these handicapping conditions, communicate more effectively with these handicapped persons, understand the basic rights they have, and know where to get further assistance. New York and Texas have developed excellent training manuals for criminal justice personnel to meet these needs (Heller, McGlenn, Theilheimer, & Catemas, 1986). They can easily be adapted to local needs, but specialists are needed to provide the training.

Lawyers and judges need additional training, especially in the area of available programs and resources in the community, to draw upon in the court process and to find possible alternatives to incarceration. The Individual Justice Plan developed in Nebraska seems to meet these needs and could serve as a model for replication or adaptation by other states. It includes the development by an interdisciplinary team of an individual plan for each developmentally disabled offender upon his or her entry into the criminal justice system, with focus on the needs of the offender and the community resources that can be drawn upon to meet these needs. It is essentially an alternative to incarceration which judges and prosecutors will buy into if they are assured that the offender will be under control while receiving needed services in the least restricted environment. However, if the offender is incarcerated, the plan guides the habilitative efforts (Morton, Hughes, & Evans, 1986).

Probation and parole officers also need training in identifying the needs of the handicapped, available community-based resources for such persons, and how to make appropriate referrals and linkages. With case loads commonly exceeding 100 clients, their own contact with the offender is by necessity short and infrequent. They need to be able to surround their handicapped client with a supportive network that can often be the key to the client's success while on probation or parole.

The primary need for further training by the special education higher education community is in the area of training correctional special education staff. Currently, many special education teachers in corrections have but temporary or emergency certificates, teach in areas in which they are not certified, or lack experience in dealing with adult as compared to juvenile clients. Training is needed to make sure that not only the letter but the spirit of PL 94-142 is carried out in corrections, and that needed programs and services are available to handicapped offenders beyond the age of 22. Preservice and inservice training is sorely needed in virtually every area of special education delivery, from identification and assessment through transition back into the community.

An excellent training model that can be used as a starting point is the 8 C/SET (Correctional Special Education Training) Project training modules developed by a federally supported project directed by Robert Rutherford at Arizona State University (Posluszny, M., 1986). With some adaptations to allow for differences between adult and juvenile offenders as well as different local conditions, the C/SET materials could be used in training old, new, and potential staff to provide better special education services in the correctional facilities in any state.

Currently, there is a critical shortage of fully certified special education staff in correctional facilities. For that reason many agencies have found it necessary to retrain existing general education staff and hire staff with temporary or provisional certification. Their effectiveness depends on further training. However, due to the isolated location of many correctional facilities, universities must be willing to bring some courses into the institutions so that correctional staff has easier access to them. This has been done very successfully in Maryland, where Peter Leone from the Department of Special Education of the University of Maryland brought an array of special education courses into the prison so that staff could become certified and/or obtain advanced degrees in special education.

Program Development and Monitoring

Specialists are also needed to assist in the areas of program development, monitoring, and evaluation. Currently in many correctional institutions, special education is little but a watered down adult basic education program with the sole emphasis on basic reading and math skills. Correctional agencies need assistance to understand the need and nature of a total functional curriculum that incorporates academic and vocational training, social and living skills, work, and recreation. This can be accomplished through the monitoring function assigned by law to the state education agency, but only if the monitors approach their duties not as inspector generals but as technical advisors. Staff in many correctional agencies have reported that they fear being monitored for compliance with PL 94-142 since they know they are out of compliance. Yet, when they are monitored by a positive and constructive team, they find the monitoring experience is the best way to get the programs developed and upgraded.

While in direct contact with correctional staff, either in their role as trainer or monitor, specialists can serve another important function, that is, to help link correctional agencies with support systems and service agencies in the communities. Corrections has traditionally functioned in a vacuum, and most correctional staff do not know the resources in the community that they could draw upon for assistance. They need to link up with such agencies, particularly in order to assist their soon-to-be-released clients in making appropriate plans for their transition back into the community.

Research and Evaluation

Research in correctional special education is virtually lacking, except for some statistical studies on the number of handicapped offenders and the incidence of various handicapping conditions among juvenile offenders (Rutherford, Nelson, & Wolford, 1985). There is a great need for applied and evaluative research in correctional special education. For appropriate programs and services to be developed to meet the needs of handicapped offenders, research is needed to determine what kinds of treatment modalities work best with what kinds of offenders. Furthermore, there is a great need for follow-up research to determine what kinds of correctional programing and what other factors lead to success after release in terms of increased employment, self-sufficiency, quality of life, and decreased recidivism. Correctional agencies are not equipped to conduct such research. In fact, they are sometimes barred by law from pursuing contacts with releasees, and hence from conducting scientifically valid follow-up research.

Advocacy

Finally, the incarcerated handicapped need advocacy efforts on their behalf by knowledgeable and credible professionals. They usually do not have families or other support networks that can help. Many agencies in the community serving the handicapped either have not discovered handicapped criminal offenders or they fear having to deal with them. Numerous misconceptions about handicapped offenders bar them from being served on an equal basis with other handicapped groups. Better knowledge on the part of the public, policy makers, and service providers is needed as well as active advocacy to promote better care and assistance.

A recent survey conducted by the Institute for Economic and Policy Studies on the involvement with handicapped criminal offenders by state protection and advocacy agencies, developmental disabilities councils, associations of retarded citizens, and state mental health and mental retardation agencies indicated massive ignorance and neglect on their part. However, it also revealed what an active agency can accomplish in this area. In South Carolina, for example, the state protection and advocacy agency (SPAA) is very involved in corrections. The South Carolina SPAA provides legal counsel to offenders and monitors the Department of Corrections' Mental Developmental Disabilities Unit on a monthly basis. This agency has provided training for correctional staff, and through advocacy has influenced the Department of Corrections to hire a Section 504 coordinator to deal constructively with the grievances of handicapped inmates. The result is one of the best correctional programs for mentally retarded offenders in the country and one of the few that was not initiated through costly litigation.

Outside advocates also should be available to review state laws, rules, and regulations to determine if these are adequate to meet the needs of handicapped offenders. If they are not adequate, these advocates could provide testimony to ensure that legislatures respond to the needs and rights of the handicapped, even of those who have committed crime and are in prison.

CONCLUSION

American society can ill afford, from either a moral or economic viewpoint, to ignore the needs of its incarcerated or its handicapped to the extent it has in the past. Correctional education, including special education, is by no means a guarantee, in terms of individual success after release, of reduced recidivism, or of a high return on the dollars spent. Correctional special education, however, is a second chance — perhaps the last chance — to compensate for past failures on the part of individuals and society.

It seems clear by now that the problems of crime and criminal justice cannot be solved by meeting out longer sentences and building more prisons. Even if it would work — which it does not — it is a costly alternative, and in Dostoevsky's sense, an uncivilized one. By comparison, more and better educational and work opportunities for inmates, including the 40% of the prison population who suffer from handicapping conditions, is a relatively inexpensive approach — and it just might work better.

It is not quite true, however, that there are no guarantees. There is one guarantee. If our society continues to do nothing or make only marginal efforts, the millions of men, women, and children who come out of prisons, jails, and juvenile correctional facilities neither can nor will survive in our communities as productive, law-abiding, and self-supporting citizens. They will not only waste their own lives but deprive lawful citizens of their quality of life through further criminal victimization and the enormous economic burdens of the criminal justice and welfare systems. If, as a society, we fail to meet the educational and treatment needs of criminal offenders, they will continue to be a terrible nightmare in the American dream.

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Selected Research Issues in the Education of Adolescents with Behavioral Disorders

Michael H. Epstein and Douglas Cullinan

Adolescence traditionally has been viewed as a stressful, tumultuous period of life (see McCandless, 1970). This stereotype is challenged by recent evidence that teenaged people ordinarily cope with and adjust to the succession of challenges and changes with which they are faced (Braaten, 1985; Lipsitz, 1985). However, it is very clear that not all adolescents make a smooth transition to adulthood. During this period some children first show an inability to meet the social, academic, and other demands placed on them by peers, adults, or themselves. Other pupils whose behavioral and learning problems had been recognized earlier in life may continue to show these problems, or worsen substantially. Clearly, adolescents with behavior and learning problems present a significant challenge to educators and other professionals who want to understand them and help them adjust to and assume the responsibilities of adulthood (Cullinan, Epstein, & Lloyd, 1983; Mercer, 1987).

Developmental-Educational Goals

Theories of adolescent development vary, but some general statements about the nature of this period can be briefly stated. Adolescence begins with the onset of puberty; it consists of a series of important developmental challenges and tasks that must be mastered; and it ends as the individual assumes the roles and responsibilities of adulthood (Skolnick, 1986). Because formal education plays a critical role in our society, adolescents generally experience these developmental changes within the context of secondary education (Epstein, 1982). Therefore, important goals for the adolescent period are properly viewed within a framework that is both developmental and educational. Several developmental-educational goals appear to apply to adolescents (Epstein, 1982; Epstein & Cullinan, 1979) who vary, of course, as to when and how much each goal is achieved. Prominent among these goals are social, academic, and vocational competence.

Social competence. Adolescents should use the school to test, elaborate, strengthen, and refine interpersonal skills. The formal classes, informal subcultures, and other social relationships with peers and adults provide countless opportunities to develop needed social skills.

Academic competence. Adolescents must consolidate and build on their basic tool skills. From this foundation, they can take advantage of curricula and instruction designed to develop further intellectual growth.

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Vocational competence. Our society views vocational achievement as closely related to adult adjustment. Secondary school pupils need to become aware of various career possibilities, learn skills necessary for gaining and maintaining employment, and otherwise prepare for a career.

Failure to achieve or make progess toward these developmental-educational goals may signal difficulty in adjusting to adult and community life. We recognize that all young people in special programs for the behaviorally disordered do not have needs in these three areas, and that many have other important personal and educational needs in addition. Still, our view is that most behaviorally disordered adolescents are handicapped by their failure to progress toward one or (usually) more of these goals to an acceptable extent, within an acceptable period of time. As a corollary, appropriate education for them should provide social, academic, and vocational education. The importance of this point to those who educate disturbed adolescents has been underscored elsewhere:

> Such failures are, to a considerable extent, education's responsibility: Poor education may have caused, contributed to, or compounded these failures, and proper education can help the young person resume progress towards developmental-educational goals. (Cullinan et al., 1983, p. 208)

Prior to the passage of Public Law 94-142, secondary school students with behavioral and emotional problems were often treated merely as disciplinary cases; frequently they were encouraged to leave school as soon as possible (Braaten, 1985). Especially since the enactment of PL 94-142, numerous special education and related service programs have been developed to serve this population. In a sense, then, the education of behaviorally disordered adolescents is a relatively new endeavor. Because of this, many questions regarding the complex nature of educating these pupils have not been systematically studied. The purposes of this article are to review research on the social, academic, and vocational characteristics of behaviorally disordered adolescent pupils, and to discuss some key research issues involved in the education of such pupils.

SOCIAL, ACADEMIC, AND VOCATIONAL DIFFICULTIES

This section examines some of the available information as well as needed research on social, academic, and vocational difficulties of behaviorally disordered adolescents. Because the empirical study of school-system-identified behaviorally disordered pupils is limited, relevant research with related populations (e.g., learning disabled, juvenile delinquent) is also cited.

Social Competence

Importance and problems. The importance of adequate social skills development among children and adolescents has been emphasized as "an essential development achievement . . . that may critically influence their later social, emotional, and academic adjustment" (Hops, 1976, p. 1). Research has linked social skills deficits to academic underachievement, delinquency, poor self-concept, truancy, and a variety of other maladaptive behaviors (Conger & Keane, 1981; Dodge & Murphy, 1984; Michelson & Wood, 1980). Moreover, the success or failure of mainstreaming handicapped pupils into regular classes appears to be related to their social competence. Gresham (1982, 1983) has shown that mainstreamed handicapped students interact infrequently, and to a large extent, negatively with nonhandicapped pupils, and that handicapped pupils are poorly accepted by their nonhandicapped peers. Unfortunately, children with inadequate interpersonal skills do not generally outgrow their social deficits; on the contrary, they are likely to develop more adjustment problems (Dodge & Murphy, 1984; Kohlberg, LaCrosse, & Ricks, 1972; Michelson & Wood, 1980).

Research has shown that social competence deficits are one of the primary patterns of problem behavior that bring pupils into school-based programs for the behaviorally disordered (Epstein, Kauffman, & Cullinan, 1985). Disturbed adolescents have been characterized as socially inept (Dodge & Murphy, 1984), unable to develop satisfactory peer relationships (Epstein et al., 1985), less socially accepted (Sabornie, 1985), and more depressed (Cullinan, Schloss, & Epstein, 1987).

Research needs. It may appear that much is known about the social competence skills of behaviorally disordered students, but this is not really the case. The bulk of research has examined students who were not identified as behaviorally disordered, so the degree of social skills problems and the difficulty of addressing them may have been underestimated by available research. Assessments of social competence and related characteristics of behaviorally disordered adolescents in school programs are needed in order to build a more specific database for identification and treatment of social competence problems.

The research conducted to date has relied extensively on reported functioning, usually asking teachers, parents, and peers to complete rating scales or checklists on the social competence of target pupils. While the findings have been consistent in identifying global social skill deficits, the assessment methodology has left large gaps in our understanding of the social competence of behaviorally disordered adolescents. For instance, little is known about the overt social interactions of behaviorally disordered adolescents, especially relative to their nonhandicapped peers and teachers in integrated educational settings. Thus, direct observational studies of interpersonal behavior patterns of these students are needed.

Those experienced with the behaviorally disordered recognize that these students often do not perform nearly as well as they can. It may not be enough for behaviorally disordered students to learn new social skills; they probably must be motivated to perform these learned skills appropriately. Gresham (1986) has identified four different types of social skill problems, making a distinction between problems of acquisition and problems of performance. The four types are skill deficits, performance deficits, self-control skill deficits, and self-control performance deficits. Determining the type of deficit depends in part upon whether the adolescent knows how to perform the skill, and the existence of emotional responses. Analyzing social skill problems into these four general groups may be helpful in understanding and modifying the social skills of disturbed adolescents. More generally, assessments of social and other competencies of behaviorally disordered adolescents may benefit from the recognition of an acquisition versus performance distinction (Bandura, 1969).

Pupils with well-developed social skills generally receive more favorable attention and positive feedback from teachers and peers than pupils with deficient social skills (Cartledge & Milburn, 1986). Research in educational settings is needed to identify and measure the peer- and teacher-directed social behaviors of normal and behaviorally disordered adolescents. Comparisons of the social patterns of these two groups may help isolate critically deficient social skills for remediation.

One key to developing and maintaining social interactions seems to be in knowing how to "read" (accurately comprehend) the social cues in any group setting. For example, aggressive youngsters tend to attribute hostile or threatening intent to social cues that others view as nonthreatening (Dodge, 1980). Such attributions could provide these youths with a justification for aggressive interactions, making such aggressive behavior more likely to occur. It is unknown how accurately disturbed adolescents interpret others' social behavior, and this would seem to be a potentially fruitful area of study in order to determine the existence and nature of any deficits.

Academic Competence

Importance and problems. Failure to develop adequate academic skills is correlated with not only concurrent school-based behavior problems but later adjustment difficulties as well. A national survey of over 10,000 secondary school students indicated that, of pupils requiring frequent discipline, more than 80% were academically deficient; of those who were unpopular with their peers, more than 70% were academically deficient; and 70% of maladjusted pupils were academically deficient (Oliver, 1973). Follow-up studies indicate that pupils who leave school with limited academic competence are likely to evidence higher levels of under- and unemployment (Maughan, Gray, & Rutter, 1985; Zigmond & Thornton, 1985), and that these academic deficiencies persist well into adulthood (Silberberg & Silberberg, 1971).

In addition to their obvious social-emotional problems, disturbed adolescents typically experience considerable difficulties in *academic preparedness* skills and in overall *academic functioning* (Epstein, Kinder, & Bursuck, 1988; Kauffman, Cullinan, & Epstein, 1987; Mastropieri, Jenkins, & Scruggs, 1985). With respect to academic preparedness, disturbed adolescents have been found to be deficient in attributional patterns (Perna, Dunlap, & Dillard, 1983), test-taking skills (Scruggs, Mastropieri, & Tolfa, 1986), memory skills (Glueck & Glueck, 1950), impulsivity (Letteri, 1979), class attendance, punctuality, and preparedness (Zigmond, Kerr, & Schaeffer, 1986), and intellectual independence (Hogan & Quay, 1984). A significant percentage of adolescents with behavioral disorders have academic difficulties, with estimates ranging from about one-third up to 80% (Cullinan et al., 1983). About 50% of disturbed eleventh graders show functional literacy insufficient to receive a high school diploma (Cawley & Webster, 1981). On standardized academic achievement tests, disturbed adolescents have been found to be functioning below expected grade level performance in reading, arithmetic, spelling, and overall achievement (e.g., Barnes & Forness, 1982; Coutinho, 1986; Leone, 1984; Motto & Wilkins, 1968; Stone & Rowley, 1964). In addition, the tendency seems to be that the academic deficits of disturbed pupils grow larger over time (Cullinan et al., 1983).

Research needs. Building academic competence is an area for which the educator of behaviorally disordered students must be well prepared. Yet, except for documenting that a relationship exists between academic and behavioral function and that disturbed adolescents are deficient in academic skills, existing research has yielded few details on the academic needs of behaviorally disordered adolescents. Nonetheless, future research can build on this foundation in several ways.

The majority of the research in this area has studied adolescents in day or residential programs (e.g., Curry, Anderson, Zitlin, & Guise, 1987; Leone, 1984), out-patient psychological or psychiatric clinics (e.g., Dean, 1977; DeHorn & Klinge, 1978), or in-patient psychiatric facilities (e.g., Barnes & Forness, 1982; Motto & Wilkins, 1968). The generality of this research to school-system-identified behaviorally disordered adolescents remains in question. Because approximately 80% of disturbed pupils are found in regular schools (mainstreamed or self-contained classrooms; U.S. Department of Education, 1985), behaviorally disordered pupils in regular educational settings need further study to specify details of their academic problems and needs.

The dependent measures used to study academic preparedness and functioning have included, for the most part, standardized achievement tests (Epstein et al., 1988). Such measures yield useful global indices for general comparison, but do not usually provide detailed information on specific areas of strength and weakness. Recent measurement innovations such as curriculum-based assessment measure performance in relation to the academic content on which the pupils are receiving instruction in their educational program. The psychometric acceptability of curriculum-based assessment has been advocated widely, as has been its relevance to developing, implementing, and evaluating educational programs (e.g., Deno, 1985; Tucker, 1985). Curriculum-based assessment of behaviorally disordered adolescents would provide important information about their academic needs.

Most of the academic competence research has been directed toward basic reading, arithmetic computation, and spelling skills. Written expression, oral communication, and reading comprehension are other types of basic educational skills in which disturbed adolescents may show incompetence and thus need to be studied. Because some of these students perform adequately or even very well in academics, attention must also be directed to such secondary school academic content areas as science, history, English, computer literacy, and other subjects in which these pupils are likely to be mainstreamed.

Along with broadening the basic skills studied, researchers need to increase the types of academic preparedness competencies studied. For instance, there is a need to examine the status of learning strategies among disturbed adolescents. Learning strategies are techniques that the student uses to enhance the acquisition, manipulation, integration, retention, and storage of information across content and settings (Alley & Deshler, 1979; Deshler & Schumaker, 1986). Learning strategies include skimming reading selections, locating information from textbooks, recalling information for tests, locating answers to questions, taking notes from lectures, and numerous other strategies. Information in this area will indicate to teachers whether they need to focus efforts on teaching behaviorally disordered adolescents how to learn as well as what to learn.

The teacher effectiveness literature has identified a number of instructional process variables that enhance pupil performance in regular classroom settings (Rosenshine, 1985; Stevens & Rosenshine, 1981). In general, effective teachers allocate more time for instruction, present material in a systematic fashion, review work daily, frequently ask questions, provide for positive and corrective feedback, and encourage independent practice. Researchers have begun to study instructional process variables in special education settings where learning disabled and mentally retarded pupils are educated and have found that special education teachers do not extensively engage in these effective educational practices (for a review see Morsink, Soar, Soar, & Thomas, 1986). We need to extend this line of research to settings in which behaviorally disordered pupils are educated in order to examine the relationship between instructional processes and academic learning. Of special interest will be the degree to which practices needed for effective teaching of nonhandicapped students will be sufficient to maintain behaviorally disordered students in regular classes.

Vocational Competence

Importance and problems. Although there are many yardsticks to measure successful transition from adolescence to adulthood, perhaps none is more meaningful than employment. The ability to prepare for and secure gainful and purposeful employment is, for better or worse, generally used by society to ascertain an individual's success. Further, there is a clear relationship between employment and personal adjustment (O'Toole, 1973). Many youths state that finding and maintaining a job is the most difficult aspect of transition to adulthood (Corthell, 1984).

Handicapped youths rank high among unemployed groups in the United States (U.S. Commission on Civil Rights, 1983). Recent follow-up studies of pupils who have left special education programs have reported that approximately two-thirds of them are unemployed, that many who are employed work only part-time, and that more than half of these individuals earn less than the minimum wage (Edgar, 1987; Hasazi, Gordon, & Roe, 1985; Mithaug, Horiuchi, & Fanning, 1985). There is some evidence that handicapped youngsters who receive vocational education are more likely to be employed (Hasazi et al., 1985), but handicapped pupils comprise only 2% of the vocational education enrollment, and 70% of these pupils are in segregated, not mainstream, settings (Corthell, 1984).

Little of the above data stems from studies of the behaviorally disordered; thus, little is known about the career aspirations, vocational preparation, or employment status of such adolescents. Data from a survey in the state of Washington (Neel, 1987) found that about 60% were employed, mostly full-time or nearly full-time. Other research indicates that, compared to their nonhandicapped peers, these pupils evidence lower occupational aspirations (Plata, 1981) and are less vocationally skilled (Karajanni, 1981). Not surprisingly, on-the-job social problems appear to be a main reason for behaviorally disordered students' job dismissals (P. Leone, personal communication, 1986).

Research needs. Because of the presumed bleak vocational prognosis for behaviorally disordered adolescents, vocational preparation and training have been cited as important priorities in the education of these students (Kelly et al., 1983). Ironically, their teachers do not rate vocational preparation as a high priority, and very little instructional time is spent on vocational development (Schmid, Algozzine, Maher, & Wells, 1984). Perhaps a first step in modifying this situation is research to provide a more detailed understanding of the employment status of disturbed adolescents. If the vocational status of former behaviorally disordered students is found to be as poor as informal observation suggests, educators of these students and those who prepare them in colleges and universities may be more willing to stress vocational education. In performing these studies of the behaviorally disordered, researchers need to consider a range of variables related to students' background (e.g., educational, psychological, demographic, social-familial) as well as outcome (vocational, other life adjustment). Outcomes may differ in relation to vocational attitudes (career aspirations, perceived importance of working) held by the student as well.

As with academic skills, researchers need to investigate the instructional process in vocational programs for behaviorally disordered adolescents. We are aware of no teaching effectiveness research in the area of vocational education, but it is logical that some of the same teaching practices are effective in vocational as well as academic education settings. Variables specific to vocational education would include the manner in which career exploration, vocational training, and on-the-job training are presented.

Observational studies need to examine both the production skills — those needed for acceptable quantity and quality of output (product and service) — and the social skills actually required at job sites. Contrasts of the production and social skills exhibited by behaviorally disordered adolescents and their nonhandicapped peers ought to reveal needed areas for training.

SOCIAL, ACADEMIC, AND VOCATIONAL INTERVENTION RESEARCH

Some of the most critical research issues about behaviorally disordered adolescents, of course, involve educational treatments for them. As stated, our perspective is that an appropriate education program for these youths should include academic, social, and vocational offerings. This view is based on informal experience as well as an examination of the literature. However, it must be admitted that there is very limited research evidence that such emphases will produce the desired outcomes. Thus, a general research issue involves increasing the amount and quality of intervention research with these students. A selected few of the more specific research questions in this area are presented below.

Program elements. Assuming that social, academic, and vocational offerings need to be major elements of education programs for behaviorally disordered adolescents, a great deal of work remains to select and refine these elements. Some guidance is available from the literature on social, academic, and vocational curricula, but studies and demonstrations have rarely employed behaviorally disordered adolescents as subjects. Several typical characteristics of behaviorally disordered adolescents, however — their histories of school failure, conflict with adults, deviant peer relations, and motivation difficulties, to name a few — ought to caution researchers and practitioners that curricula found useful with other special groups may not be successful with behaviorally disordered adolescents, or may need modifications. Thus, the appropriate education of behaviorally disordered adolescent students demands that curriculum elements be evaluated specifically with this population.

In the social area, there are several likely possibilities. We would consider methods for creating a highly structured classroom (e.g., Filipczak, Friedman, & Reese, 1979; Heaton, Safer, & Allen, 1982; see also Paine, Radicchi, Rosellini, Deutchman, & Darch, 1983), teaching social skills (e.g., Goldstein, Sprafkin, Gershaw, & Klein, 1980; Hazel, Schumaker, Sherman, & Sheldon-Wildgen, 1981), and teaching cognitive-behavioral problem solving of social conflicts (e.g., Feindler, Marriott, & Iwata, 1984; Goldstein & Glick, 1987).

Further, brief counseling and verbal communication mechanisms need to be in place. Some of the above applications hold considerable promise in that they already have been utilized with identified behaviorally disordered adolescents or highly similar populations.

Academic intervention possibilities are also numerous, with some experimental evaluations of them also available with this population. Again, highly structured approaches are recommended; programed and self-paced drill-and-practice materials for individual students have been reported (e.g., Mercer, 1987). Even better are structured curricula for teaching basic academic skills to groups (e.g., Carnine & Silbert, 1979; Silbert, Carnine, & Stein, 1981). Additionally, school *learning strategies* (e.g., Brown, 1984; Deshler, Schumaker, & Lenz, 1984) appear to be promising adjuncts to academic skills, and need to be explored with the behaviorally disordered.

In the vocational area, few applications to behaviorally disordered students have been reported. Procedures developed for vocational rehabilitation and teaching of other handicapped populations or various high risk groups (see Brolin & Kokaska, 1979; Fink & Kokaska, 1983; Rusch, Schutz, Mithaug, Stewart, & Mar, 1986) may provide good leads. However, available possibilities do not offer the hope of easy success and research needs are extensive in the vocational education area.

Once social, academic, and vocational education elements are selected, they must be combined into a feasible *package*. One critical aspect of feasibility is that the package must be readily put into operation by teachers and other personnel responsible for implementing it. A little thought will suggest a large number of teacher education research issues in this regard.

Research that examines the effectiveness of educational interventions must take care that those interventions have been implemented as intended. This is especially difficult in educational and other applied settings, of course, but there are several steps that can be taken to help protect against threats to intervention integrity (Kazdin, 1980). First, the social, academic, vocational, and other program elements should be specified in detail, perhaps in a manual or like form. Second, the teachers and other personnel delivering intervention need training in exactly how to carry out specified procedures with the behaviorally disordered adolescent students. Training might include *booster* sessions on a regular or as-needed basis. Third, implementation should be supervised as appropriate, with feedback provided to the teachers and other intervention personnel as to how key aspects of the intervention package are being implemented. Finally, there should be measurement of implementation so that empirical statements can be made in regard to how accurately and extensively each part of the intervention was actually carried out. Though these steps require extensive efforts, they will make social, academic, and vocational intervention research more valuable to other researchers and to those in the field who will use the validated procedures.

Some of the impetus for research in interventions for behaviorally disordered adolescent students stems from the current emphasis on transition from student to out-of-school roles. This transition process is a challenging area for researchers for various reasons. First, the conditions involved in such transitions are poorly described and little understood at present. There has been, as noted earlier, little observational research describing in-school training situations, let alone the myriad vocational and other situations that make up the post-transition environment. As a result, it is impossible to confidently specify conditions that facilitate or impede successful transitions. Secondly, as Stokes and Baer (1977) pointed out in their review of teaching techniques for generalization, there is unfortunately no well-developed technology for promoting generalization of people's behavior changes. Clearly, much research is needed on generalization techniques that can be effective within education programs for normalizing the social, academic, and vocational functioning of behaviorally disordered adolescents.

Also, as was pointed out previously, most of the research on the characteristics of this population has been conducted by nonspecial educators in noneducational settings. A preponderance of the research has been done by mental health personnel on adolescents referred to psychiatric clinics. Thus, the question of the generalization of these findings to school-system identified pupils needs to be raised, particularly with respect to pupils in integrated educational programs. Recent government reports indicate that approximately 1% of the schoolaged population has been identified as seriously emotionally disturbed (U.S. Department of Education, 1985), and of those labeled, 80% are educated in integrated settings. Moreover, 44% of these pupils are placed in mainstream settings and thus are being educated next to nonhandicapped peers. Therefore, in order to better understand the social, academic, and vocational characteristics of these pupils, and how to develop adequate interventions, researchers need to turn their attention to disturbed adolescents in integrated settings and develop a reasonable database.

Finally, in order to properly evaluate, apply, and generalize the findings of research, adequate descriptions of subjects are necessary. An analysis of published research in behavioral disorders has indicated that adequate descriptions are not always presented in terms of subject selection criteria, demographic characteristics, behavioral adjustment, academic performance, and other relevant areas (Olinger, Epstein, Karsh, Ormsby, & Prey, in press). The use of marker variables has been suggested as a means of improving the reporting of research efforts. Marker variables are defined as a "background variable . . . that is sufficiently relevant to the measures being used by most studies in a defined research area that it facilitates the general alignment of findings from one study to another" (Bell & Hertz, 1976, p. 8-9). Examples of marker variables include description markers (sample characteristics), substantive markers (definition of the disability), and topical markers (aspect of condition under study; Keogh, Major, Omori, Gandara, & Reid, 1980). The use of marker variables would allow researchers and consumers of research common reference points with which to compare and contrast research findings and generalize results across studies. It would appear that the more marker variables information researchers can provide in their reports, the greater impact the research will have in how seriously emotionally disturbed pupils are perceived and treated in public school settings.

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Social Networks of Behaviorally Disordered Adolescents and Their Nonhandicapped Peers: A Preliminary Investigation

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The study presented here examines the qualities and characteristics of the social networks of students identified as behaviorally disordered and served in special education programs. This descriptive investigation was designed to explicate the concept of social networks for disabled youth and examine the differences between the social networks of these youth and those of their nonhandicapped peers. An understanding of the social networks of behaviorally maladapting young people is considered important for at least two reasons. First, adolescents with behavioral problems often have difficulty developing and maintaining interpersonal relationships with adults and peers. Second, these adolescents are in particular need of the resources other persons can provide in adapting to the demands of every day life at home, in school, and in the community.

Social Networks and Behaviorally Disordered Youth

In the last several years, there has been a great deal of interest among those working in the various mental health fields in the study of social networks. Called the *personal environment* or *personal community* by some researchers (Gottlieb, 1981; Hirsch, 1981), the notion of a social network is intended to indicate all those persons who form an important source of contact and support to a focal individual. The network may include family, friends, and persons in formal helping roles who provide emotional support, friendship, material assistance, or advice and guidance.

A large body of literature has emerged which suggests that networks may act as a potent resource in protecting individuals from stress (e.g., Cohen & Syme, 1985; Heller & Swindle, 1983), facilitating how an individual copes with a loss or significant life change (e.g., Hirsch, 1980; Perl & Trickett, 1988), and determining how and from whom help is sought in times of crisis (e.g., Gottlieb, 1981; Tracy, 1987). With specific regard to children and adolescents, research has shown the presence of various sources of social support to be associated with more successful pregnancy outcomes (Barrera, 1981), better parent-rated behavior (Sandler, 1980), improved grades and attendance (Felner, Ginter, & Primavera, 1982), and greater perceived school competence (Cauce, Hannan, and Sargeant, 1986).

While there are no studies which have systematically examined the social networks of behaviorally disordered youth, research with other handicapped

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populations suggests that the study of social networks may have important conceptual and practical implications for groups with special needs. For example, some authors have studied social support in families with a physically handicapped child. Kazak and her colleagues (Kazak & Marvin, 1984; Kazak & Wilcox, 1984) studied a sample of families with a spina bifida child and a comparison group of families matched for the age of the child. Friedrich and Friedrich (1981) studied a group of families with a mentally retarded or orthopedically impaired child and a comparison group of families. In general, these investigators found higher levels of stress, and in some cases, less social support in families with a handicapped child than in comparison families.

Research examining the process through which former special education students leave secondary school programs and enter the world of work and/or supported employment has also been conducted. Statewide studies of this transition process conducted in Vermont and Colorado (Hasazi, Gordon, & Roe, 1985; Mithaug, Horicuchi, & Fanning, 1985) indicate that for many disabled young adults formal means of assistance such as vocational training and posthigh school support from social service agencies is not sufficient in helping them locate and maintain employment. The importance of social networks is illuminated by one particular finding from the Vermont study (Hasazi et al., 1985): Of those handicapped youths holding jobs, 85% reported finding employment through their "self-family-friend network" (p. 467).

Extending this line of research from those with physical and mental disabilities to behaviorally disordered adolescents can further our knowledge about adaptation, social networks, and various handicapping conditions. Findings such as those from the Vermont study draw attention to potential resources such as informal helpers, which — though often overlooked — can impact the adjustment of troubled youth. Such reports suggest the value of understanding not only how educators and service providers facilitate the adjustment of these individuals, but also how resources in their own circle of family or friends can either aid or undermine adjustment.

In order to build a knowledge base of the social networks of behaviorally disturbed youths, the present investigation explores the structural and qualitative aspects of their networks and compares these with those of their nonhandicapped peers. Specifically, the following variables will be examined: (a) the number of persons these adolescents consider important in their lives; (b) the types of exchanges made in these relationships and their directionality; (c) respondents' satisfaction with their social networks; and (d) the general makeup of respondents' network in terms of the percentages of friends, family, and nonfamily adults. This is considered an important first step in understanding the social worlds of these youngsters, uncovering patterns or characteristics which may be particularly adaptive in general or for certain subgroups, and in identifying certain formal or informal helpers who can act as resources in meeting the challenges of living.

METHOD

Sample

The sample was composed of two groups. The first group contained 113 9th-grade students who were enrolled in three traditional or mainstream public high schools. The second group consisted of 121 students who had been placed in three special high schools (two public, one private) due to school-related behavioral problems. Students were from primarily suburban areas in a southern Maryland county; however, given the large geographical area covered by the school district, rural and urban areas were also represented.

Demographic information on chronological age, gender, race/ethnicity, and parent education is presented in Table 1. As can be seen, the mainstream group had a mean chronological age of 14.2 years, was 53.6% male, 62.7% Black, 24.5% white, 1.9% Asian, and 10.9% Hispanic. The special school group had a mean age of 16.3 years, was 85.4% male, 59.7% Black, 38.7% white, 0% Asian, and 1.7% Hispanic. Thus, there are slight differences in racial/ethnic composition between the two groups, mainly due to the absence of Asians and Hispanics in the special schools, as well as more marked differences present in age and gender, with special school students being older and more often male.

The socioeconomic status of the students was operationalized through level of parent education. As can be seen from Table 1, the educational backgrounds of the parents of the two groups of students are somewhat dissimilar. Specifically, it appears that both the mothers and fathers of special education students have less extensive educational backgrounds than the parents of mainstream school students.

TABLE 1

Demographic Characteristics of Mainstream and Special School Students

	Mainstream School Students (N = 112)	Special School Students (N = 121)
Mean age (years)	14.2	16.3
Gender		
Male	53.6%	85.4%
Female	46.4%	14.6%
Race/Ethnicity		
Black	62.7%	59.7%
White	24.5%	38.6%
Asian	.9%	0%
Hispanic	10.9%	1.7%
Other	1.0%	0%
Mother's education		
Some high school or less	9.9%	26.7%
High school graduate	47.5%	45.3%
Some college	26.7%	21.3%
College graduate	10.9%	6.7%
Graduate or professional school	5.0%	0%
Father's education		
Some high school or less	9.1%	28.8%
High school graduate	41.6%	39.4%
Some college	14.3%	3%
College graduate	14.3%	3%
Graduate or professional school	6.5%	0%

Selection

After permission to enter the schools had been gained, researchers distributed informed parental consent forms to students in their homerooms. In smaller schools, forms were distributed in all homerooms while in larger schools they were distributed in only a randomly selected sample of homerooms. Return rate was approximately 35%. All students who returned signed consent forms were subsequently interviewed, except for a few who moved or transferred during the interim, and another few who had been attending their present school for less than 3 months.

Measure

All social network variables reported here were derived from the Social Network Questionnaire (Perl & Trickett, 1988), a self-report measure based on other widely used measures (Hirsch, 1979, 1980; Mitchell, 1982), which has been modified specifically for use with schoolaged teens. Consistent with the current stage of network research in general, preliminary reliability and validity data are now beginning to emerge for the present measure (Dolan, 1987; Perl & Trickett, 1988). The scale has been piloted extensively and modified as indicated by feedback from students, teachers, and research assistants.

The Social Network Questionnaire requires respondents to answer a series of questions concerning persons they have designated as important in their everyday lives. The measure is administered on an individual basis and begins with an explanation of the criteria for inclusion of persons in the "social network". Basically, these criteria limit consideration to those whom the respondent sees at least once a week and with whom the respondent participates in any of a number of significant activities (e.g., hanging out, talking about a personal problem or worry). The respondent is instructed to list the first name and initial of up to 20 such persons, and to include no more persons than fit the stated criteria.

After the network members have been listed, the participant is asked to respond to a number of questions regarding each person. These include the types of support or exchanges given by each network member to the respondent (companionship, emotional support, tangible assistance, or cognitive guidance) as well as vice versa; the primary environmental context of the relationship (school, home, neighborhood); and the respondent's satisfaction with each network member. Also, the respondent is asked how many pairs of persons listed in the network interact with each other independently of their contact with the respondent.

Given the richness of information which can be gained from the Social Network Questionnaire, a large number of distinct variables can be generated from it. Only a certain subset will be considered here. A thorough discussion of all such variables would be beyond the scope of this article. Suffice it to say further that many other network variables than those considered here are possible, a better idea of which may be gained from overviews undertaken by such authors as Heller and Swindle (1983) and Mitchell and Trickett (1980).

Variables

The following is a description of each summary network variable which will be reported for the present sample and an explanation of how it was derived.

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Network Size is the total number of social network members cited by the respondent. It can range between 1 and 20.

Reciprocity describes the extent to which the reported social interactions between network members and the respondent are bidirectional. In other words, it expresses how frequently *both* the respondent and a network member are initiators of four possible social exchanges (cognitive guidance, emotional support, tangible assistance, or companionship). The range of possible scores is 0 to 1, where 1 indicates that both members provided support in *all* dyadic exchanges and 0 indicates that only the respondent or the network member provided support in any particular such exchange.

Multidimensionality refers to the extent to which respondent/member relationships extend across a variety of social exchanges or are more limited in how many *dimensions* they cover. Since, as mentioned, there were four possible exchange categories, scores on this construct range from .25 (where only one type of exchange was indicated with each member) to 1 (where all types of exchanges occur with each member).

Overall Density refers to the degree to which the network members know and interact with each other in the absence of the respondent. Basically, this is a ratio of the number of pairs of network members reported as interacting with each other independently to the number of possible pairs. Density scores range from 0 (where no members know each other) to 1 (where all do).

Relative Utilization represents the extent to which the respondent is the provider or recipient of any of the four types of support (cognitive guidance, tangible assistance, companionship, emotional support) across all network relationships. That is, eight indices are yielded: four indicate the percentage of relationships in which the respondent reports *providing* each one of the types of support, and the other four refer to the percentage of relationships in which the respondent reports *receiving* each of the types of support.

Perceived Quality or Satisfaction was measured by the average of scores on a 5-point Likert Scale (where 1 = very unsatisfied and 5 = very satisfied), taken either across all network members (overall satisfaction) or within a particular subgroup (e.g., family or peer satisfaction).

Distribution of Domains designates the percentage of the total number of respondent/member relationships involving the particular subgroups of peers, family, and nonfamily adults.

Procedure

All students were administered the Social Network Questionnaire as part of a longer interview in association with a study of school transitions. Students were contacted either by telephone or in person at school about completing the interviews after they had returned signed informed parental consent forms. Approximately 90% of the students were interviewed at school, 7% at home, and 3% in the offices of the researchers. All participants had been duly informed before the interview of the voluntary nature of their participation, the confidentiality of their responses, and their freedom to withdraw at any point they desired.

RESULTS

Results are presented for descriptive and inferential statistical analyses. The former consists of minimums, maximums, means, and standard deviations of each variable and are intended to provide a sketch of the social networks of each of the student groups (mainstream and special school). The latter are *t* tests comparing the two groups on each network variable to explore possible social network differences between the two groups.

The results are divided into three subsections which correspond to three general groupings of network variables: (a) the "structural variables" of network size, reciprocity, multidimensionality, overall density, and relative utilization; (b) the perceived quality of the social network, as measured by overall satisfaction, satisfaction with family members, satisfaction with peer members, and satisfaction with nonfamily adults; and (c) the domain distribution of the network, that is, the relative percentages of those in the network who are family members, peers, and nonfamily adults, respectively.

Network Structure

Table 2 presents the results for the structural variables of network size, reciprocity, multidimensionality, and overall density. From this set of data, it emerges that mainstream students had significantly larger networks than special school students, and that the latter described their relationships with their network members as more reciprocal than did mainstream students. Mainstream and special school students did not differ in the reported density or multidimensionality of their network relationships.

Tables 3 and 4 describe the eight indices collectively known as *relative utilization.* As can be noted in Table 3, the mainstream and special school students differ in the extent to which they receive two types of exchanges in their relationships with network members. Specifically, special school students reported that they received emotional support in a higher percentage of their

TABLE 2

Network Structure Variables

	Mainstream School Students (N = 112)			Special School Students (N = 121)			
	Range	**Mean**	**SD**	**Range**	**Mean**	**SD**	**t (df)**
Network size	1-20	9.32	5.2	2-20	8.03	4.6	1.98* (213)
Density (%)	0-1.0	.449	.28	0-1.0	.471	.29	N.S.
Reciprocity (%)	0-1.0	.457	.33	0-1.0	.583	.28	3.08** (207)
Multidimensionality (%)	.25-1.0	.80	.20	.25-1.0	.78	16.	N.S.

$^{*}p < .05$, $^{**}p < .01$

relationships than did mainstream students, and that they received tangible assistance in a higher percentage of their relationships than did mainstream students. The two groups did not differ significantly on any type of exchange provided to network members (Table 4).

In summary, then, the social networks of special school students were slightly smaller but involved more reciprocal types of relationships than those of their mainstream counterparts. Furthermore, special school students also reported the receipt of emotional support and tangible assistance in a higher percentage of their relationships than did mainstream students.

TABLE 3

Relative Receipt of Four Social Exchanges

	Mainstream School Students (N = 112)			**Special School Students (N = 121)**			
	Range	**Mean**	**SD**	**Range**	**Mean**	**SD**	**t (df)**
Cognitive assistance (%)	0-1.0	.52	.33	0-1.0	.58	.32	N.S.
Emotional support (%)	0-1.0	.56	.33	0-1.0	.66	.28	-2.43* (208)
Companionship (%)	0-1.0	.67	.29	0-1.0	.65	.28	N.S.
Tangible assistance (%)	0-1.0	.68	.32	0-1.0	.76	.26	-2.10* (199)

*$p < .05$

TABLE 4

Relative Provision of Four Social Exchanges

	Mainstream School Students (N = 112)			**Special School Students (N = 121)**			
	Range	**Mean**	**SD**	**Range**	**Mean**	**SD**	**t (df)**
Cognitive assistance (%)	0-1.0	.48	.32	0-1.0	.44	.34	N.S.
Emotional support (%)	0-1.0	.55	.31	0-1.0	.59	.31	N.S.
Companionship (%)	0-1.0	.65	.28	0-1.0	.66	.29	N.S.
Tangible assistance (%)	0-1.0	.66	.32	0-1.0	.74	.27	N.S.

Perceived Quality

Four summary indices were used to measure how satisfied respondents were with their network members. The statistical analyses for these indices for the two groups appear in Table 5.

It is evident here that, overall, both mainstream and special school students are satisfied with the relationships they have with their network members. Furthermore, special school students reported being more satisfied with their relationships overall and specifically with their friends than did mainstream students.

TABLE 5

Overall Satisfaction and Satisfaction with Various Subgroups

	Mainstream School Students (N = 112)			**Special School Students (N = 121)**			
	Range	**Mean**	**SD**	**Range**	**Mean**	**SD**	**t (df)**
Overall satisfaction	1-5	3.68	1.09	1-5	4.13	.81	-3.49* (190)
Satisfaction with family	1-5	3.82	1.23	1-5	4.18	1.04	N.S.
Satisfaction with friends	1-5	3.66	1.12	1-5	4.12	.84	-3.35* (188)
Satisfaction with non-family adults	1-5	4.06	1.16	1-5	4.30	.95	N.S.

*$p < .001$

TABLE 6

Percentage of Networks Composed by the Subgroups of Family, Friends, and Non-Family Adults

	Mainstream School Students (N = 112)			**Special School Students (N = 121)**			
	Range	**Mean**	**SD**	**Range**	**Mean**	**SD**	**t (df)**
Percentage family	0-100	21.5	22.3	0-100	33.8	33.0	-3.62* (208)
Percentage friends	0-100	75.6	24.3	0-100	55.0	35.9	4.79* (209)
Percentage non-family adults	0-100	2.9	10.8	0-100	11.2	23.1	-4.00* (170)

*$p < .001$

Distribution of Domain: The data for the percentage of respondents' network members who were described as family, friend, and nonfamily adult are presented in Table 6.

Mainstream students had networks which on the average had 21.5% of their members from the respondent's family, 75.6% peers, and 2.9% nonfamily adults; special school students had networks which were comprised of 33.8% family members, 55.0% peers, and 11.2% nonfamily adults. *T* tests indicate that the student groups differed on the percentages composed by each subgroup for friend and nonfamily adult. Thus, special school students had a larger percentage of family and nonfamily adults and a smaller percentage of peers.

Due to the demographic differences between the two samples, a series of analyses was undertaken to determine whether age, gender, or parent educational background related to any of the social network variables. While such relationships are informative at face value, the main purpose of tnese analyses was to determine whether any such relationship might cloud the interpretability of mainstream/special school differences. No relationships were found for either mother or father educational background. Females reported less dense networks (t [180] = 2.65, $p < .01$), more provision of emotional support to network members (t [195] = 2.01, $p < .05$), and lower percentages of adult network members (t [225] = 2.82, $p < .01$) than did adult males. Older students tended to report higher percentages of adults (2 [23] = .19, $p < .01$) and lower percentages of friends (r [235] = -.18, $p < .01$). Only the latter three findings affected variables on which mainstream/special school student differences had been found. Thus, two analyses of covariance were performed: Gender and age were employed as covariates in testing mainstream/special school differences on percentage of adult members, while age alone was used as a covariate in another such analysis of percentage of friend members. The differences reported previously between mainstream and special school students on the variables of the percentages of nonfamily adults and friends remained significant at the .05 and .001 levels, respectively.

DISCUSSION

The present study explored the nature of the social networks of a sample of adolescents in special schools and a group of their 9th grade, public school peers. The samples themselves were not identical in terms of age-range, gender, or socioeconomic status. Also, the need for informed consent may have resulted in a sample that has higher average levels of support than the population from which it was drawn. Thus, caution should be exercised in drawing conclusions from the present set of results. Still, the data do suggest that the interpersonal worlds of adolescents in special schools differ from those of their public school counterparts. Furthermore, these differences cut across a variety of social network characteristics in ways which hold conceptual, methodological, and pragmatic implications.

Specifically, network differences between adolescents in special schools and 9th graders in regular public schools included structural aspects of social networks, such as their size and reciprocity; overall satisfaction; the kinds of support expressed in interpersonal relationships; and the degree to which networks were comprised of peers, family members, and adults. Some of these findings may be intuitively appealing and consistent with our observations of these youths. For example, that the social networks of special school students are smaller than those reported by public school 9th graders may be expected and explained at least partially either by the presumed social skill deficits of the special school population (see Gresham, 1981) or by the restricted range of peers available in these smaller schools. However, given these limiting factors, the actual average difference of about one network member between these two populations does not indicate exceedingly large differences and suggests looking beyond network size to other network characteristics.

One such characteristic on which the two groups differed is the percentage of network members who were peers, family members, or other adults. Special school students' networks included a higher percentage of nonpeers — both family members and nonfamily adults — and, in turn, a lower percentage of peers than those of mainstream students. On the one hand, this indicates potential resources in the form of informal and formal adult helpers in the networks of behaviorally disordered students. On the other, given that this population is one which is normatively striving for increased independence from parents, this finding may reflect potential stress for both adolescent and adult. It further underscores the importance of aiding special school students in making successful transitions to more independent living, since such transitions require increasingly less reliance on adult supports and resources.

In contrast to the above findings, other results seem more counter-intuitive and require further replication and research so that their meaning may be clarified. For example, the social networks of special school students were described as more reciprocal and satisfying than those reported by public school 9th graders. Given that one might assume that reciprocity, or mutual give and take, would be more likely among peers than between adolescents and adults, and that special school students had higher percentages of adults in their networks, it might be expected that reciprocity would be lower among special school students. Also, given the particular problems this group has presented with regard to interpersonal relationships, it might be expected that they would be less satisfied with others in their lives. Neither of these assumptions is supported by the present set of data — perhaps because special school students are in environments which support the development of satisfying and mutual relationships as an explicit goal.

This study also found that the networks of special school students are characterized by the receipt of a greater amount of emotional support and tangible assistance than are the networks of the public school students. In the domains of companionship and advice, special school student networks seem comparable to those of their public school counterparts. However, the increased emphasis placed on emotional support and tangible assistance suggests different kinds of interpersonal requirements. The increased emphasis on emotional support may suggest that special school students are, in general, more concerned with this aspect of their lives and are able to develop networks that allow and support this. Alternatively, this emphasis may be related to the special environments consisting of supportive adults which characterize this population. The receipt of tangible assistance may be influenced by the larger percentage of adults, particularly family, in special school students' networks whose role may indeed include a variety of kinds of tangible assistance. Distinguishing between individual and environmental factors and between relationships with adult members and peer members of these social networks would help clarify these interpretations.

Taken as a whole, the substantive findings, while clouded by lack of strict

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comparability of samples, do strongly indicate that the interpersonal worlds of special school students differ in significant ways from those of their public school counterparts. Further, these findings suggest a rich and complex pattern of interpersonal networks for special school students. The present discussion illustrates that a differentiated measure of social networks allows a more interesting and less monolithic picture of the social lives of these adolescents than might be conveyed by the notion that these students are generally deficient in interpersonal skills.

The present study, however, does not clearly illuminate the many factors which may account for the descriptive differences between the two samples. For example, such differences as those reported in the present study may be due to individual differences among adolescents in the two samples, differences in the family or school environments where potential network resources may be found, or some interactive combination of the two. As a case in point, the finding that the social networks of special school students are made up of proportionately more family members and adults than those of public students may indicate deficient skills for interacting with peers for the former group. Alternatively, this may reflect school environments geared toward more adult/student interaction and/or families on whom demands for support are more necessary and immediate. The present data cannot disentangle these potentially different contributions to the networks of special school students. Further research on these different possibilities is a high priority, and would be aided by the refinement of social network measures, and the inclusion of individual and environmental variables in future studies.

An additional issue in need of further research is the relationship between various network characteristics and adaptation to the myriad of problems facing adolescents in both special and regular schools. Research on social networks more generally suggests that different types of networks are most useful in dealing with certain types of problems. For example, Baker (1979) found greater network density, a greater proportion of family, and a smaller proportion of nonfamily and friends in the network to be associated with decreased symptomatology, but less work productivity, for psychiatric outpatients. Similarly, we might imagine that for adolescents seeking employment, networks with adults who have connections may be important in finding a job, while the presence of sympathetic and insightful peers may be most useful for the emotional support arising from those personal, relationship-oriented conversations so prevalent in adolescence. The implication of this issue is that future research should attempt to link discreet network characteristics to the successful negotiation of particular problems facing specified groups of students.

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8

Intervention

Factors in Intervention Choice

Frank H. Wood

ABSTRACT

"I believe in free will. After studying my own behavior and that of others, I feel I have no other choice." (Paraphrase of the response of Isaac Bashevis Singer to a questioner who wanted to know whether he believed human behavior reflected free choice or was predetermined.)

What factors influence educators' choices of interventions to change the behavior of emotionally disturbed/behaviorally disordered students? Are the interventions we choose the interventions we actually implement in the classroom? Do our beliefs about desirable outcomes of intervention affect our choices of interventions? Do these beliefs influence our perception of the results of interventions? What is the importance of these perceptions in our life as teachers? These are questions that have interested me throughout my professional life. In this article I plan to share some thoughts about choice of interventions and the results of some investigations I and others have made into aspects of teacher choice.

FACTORS INFLUENCING CHOICE: A CONCEPTUAL FRAMEWORK

Most teachers do not examine carefully the factors influencing their choice of classroom interventions. They are often surprised when their choice of interventions is challenged by others, perhaps believing that no other choice was possible for them. They may believe that someone else, perhaps an administrator, psychologist, or teacher trainer has made the choice for them, that they are only doing what has been determined by others to be appropriate. However, even casual observation of teachers' classroom behavior shows considerably more independent choice of how interventions are actually implemented than is consistent with a deterministic model. What are some factors that enter into teachers' choices of interventions?

Match to Theory or Principle

Adoption of a particular theoretical perspective provides one basis for choice. The influence of several theoretical perspectives (biophysical, psychodynamic, behavioral, sociological, ecological, and countertheoretical) was discussed effectively by William C. Rhodes and his colleagues in the volumes published by the Conceptual Project in Child Variance in the 1970s (see particularly Rhodes & Tracy, 1972). But we do not have to read about theory to be aware of its effects. Teachers who work closely with students who are on medication or diet programs supervised by medical doctors become very aware of the differ-

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While recognizing that both disturbed thoughts and feelings and disturbing behavior play a role in what is called variously *emotionally disturbed* or *behaviorally disordered* behavior, the term *behaviorally disordered* will be used most frequently in this article to describe the entire group of students requiring special educational programing because of their emotional and behavioral disabilities.

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ences between a biophysical perspective and perspectives more commonly adopted by educators.

For teachers, the choice among theories is usually between the *behavioral* and *psychodynamic* perspectives, the latter sometimes also called *psychoeducational* by educators, or some blend of the two. The differences between these two perspectives are familiar to all of us. The subgroups of educators who adhere strictly to one perspective or the other choose to be constrained by their choice in the way they describe behaviorally disordered students and the interventions used to guide behavior change. Behaviorally oriented educators stress the importance of direct observations of student behavior, usually summarized in a graphic format, the assignment of students to places on a hierarchy or sequence of learned skills, and the systematic application of reinforcement and punishment. Psychodynamically oriented educators stress the importance of thoughts and feelings, methods for clarifying and responding to the emotional needs of students, and measuring student progress in terms of levels or stages of development. Each perspective has its own vocabulary for describing its intervention practice, and educators who strongly hold a particular perspective may seek to advance its influence and to restrict or limit the expression of contrary viewpoints. Strongly held theoretical perspectives greatly influence some teachers' choices of interventions, or at least influence the way in which they describe those interventions and their effects.

There are two other "theoretical" perspectives that influence professional practice. One is the ethical perspective, the view of what should or must be done if professional behavior is to be judged morally correct. The work of Piaget, Kohlberg, and their colleagues has recently added much to our understanding of the complexity of human moral choice and behavior. Also important is the perspective of the law which establishes governmentally sanctioned penalties for acts that may be omitted or committed by professionals, generally termed *malpractice*. The influence of these perspectives, while obviously of much importance in establishing the context for teachers' choices of interventions, will not be discussed in detail here.

Match to Outcome

If there is a dominant cultural perspective in America, it is that of pragmatism. The pragmatic perspective directs us to make choices in terms of results, to choose interventions that have been demonstrated to produce the outcomes we desire when applied in similar situations. "Forget that theoretical garbage! Tell me what works."

The demonstrated short-term effectiveness of interventions most clearly described in the language of behavioral psychology is one reason for the great popularity of that perspective among American educators. On the other hand, the failure of changes produced by behavioral interventions to generalize across social environments and to be maintained over time are the primary reason for the survival of alternative perspectives stressing psychodynamic variables. Teachers continue to seek interventions that will be practical in the complete sense, interventions that quickly produce desirable outcomes which generalize and are maintained over time, and that are accompanied by learner self-reports of satisfaction and pleasure. Behaviorally oriented educators remain hopeful that the practice and vocabulary of behavioral psychology will prove adequate for directing teachers to assist students to desired long-term outcomes, but there is evidence that verbal persuasion and counseling interventions hypothesized to influence covert thoughts and feelings, traditionally more prominent in the repertoire of their more psychodynamically oriented coworkers, may need to be applied along with interventions based on the manipulation of environmental factors to produce the desired long-term results (Goldstein & Glick, 1987).

Match to Role/Setting

The last factor in the choice of interventions to be discussed here is that of the social perspective. Observation in school settings indicates that teachers do not always choose interventions on the basis of their professed commitment to either a theoretical or a pragmatic perspective. Their choices appear to be also influenced by role and setting factors, by the cultural norms of the community, and the school where they teach. As the author of one of the most detailed studies of teacher social behavior to be undertaken to date noted in introducing his discussion of the socialization of teachers to their professional role, "Occupations shape people" (Lortie, 1977, p. 55). From this perspective, a number of interesting questions about teacher choice and use of interventions to manage behavior emerge.

How do the social expectations of others, community, parents, and students blend with their own personal expectations of themselves in their role as teachers to affect teachers' choices of interventions to change the problem behavior? Do teachers see some interventions as justified for use to change the behavior of students with certain characteristics but not others? For some purposes but not others? Which interventions do teachers see as most appropriate for use in regular classrooms as contrasted with special settings? The answer to this last question is highly relevant to the issue of when behaviorally disordered students can be educated appropriately in regular classroom settings and when special settings should be provided, a central issue in the discussions of the call for a "Regular Education Initiative" (Reynolds, Wang, & Walberg, 1987; Teacher Education Division of the Council for Exceptional Children, 1986).

Assuming that social factors do influence teacher choices, a related question is whether these influences affect teachers as a group or are largely idiosyncratic. Another related question has to do with the mechanisms through which this influence has its effects. Human beings live within the constraints of their cultural roles as unself-consciously as they live in their atmosphere of nitrogen and oxygen, or as fish live in water, with little awareness of how the social environment affects their choices. We have little information about the extent to which teachers are consciously aware of the limits social expectations place on their choices of interventions. Lortie's findings (1977) suggest that the relative influences of personal choice and social pressures on teachers produce their effects through a very complicated equation.

RESEARCH FINDINGS ON SOCIAL FACTORS IN INTERVENTION CHOICE

Several investigations of the perceptions of teachers or teachers in training enrolled in graduate level courses at the University of Minnesota on methods for educational intervention with behaviorally disordered students over the past 4 years provide tentative answers to several of the questions just raised. While basically polls of opinion in restricted populations, the results move us several

TABLE 1

Summary of Four Studies of Teachers' Perceptions of Intervention Characteristics and Effectiveness

Study	N*	Procedure	Findings
Study 1 Wood & Hill Aversiveness of Interventions	156	Teachers rated aversiveness of 30 commonly used interventions.	Ratings of aversiveness varied. Two major factors were found: labeled "mild" and "strong" interventions.
Study 2 Wood, Maroney, & Dorsey	82	Teachers sorted interventions for effectiveness with students varying in age (7/15) and behavior characteristics (immature/socially defiant).	Teachers chose interventions rated lower in aversiveness as more effective with immature students of both ages. Chose stronger aversive interventions as among most effective only with young socially defiant student.
Study 3 Wood, Smith, & Yell (3a)	47	Teachers rated applicability of labels for 6 students (3 elementary, 3 secondary) described in brief vignettes as showing different patterns of problem behavior.	Ratings differentiated students as more or less "emotionally disturbed" or "behaviorally disordered." Label "socially maladjusted" appeared to be applied to most of group.
(3b)	47	Teachers rated usefulness of 20 interventions for managing the problem behavior of 4 students (younger/older "emotionally disturbed;" younger/older "behaviorally disordered") and for improving their social/emotional adjustment.	Interventions were seen as more useful with younger than older students and as more useful for managing behavior than for improving social/emotional adjustment.
Study 4 Wood	32	Teachers rated 21 preventive intervention strategies and 37 reactive intervention strategies in terms of disturbing effects on teacher instruction and learning of other students.	Most of the preventive strategies were rated as having moderate or highly disturbing effects for instruction and low or moderate disturbing effects for student learning. 37 reactive intervention strategies were rated as more disturbing to both teachers and students.

*Maximum N. On some items, not all responses were available for use.

steps ahead of what casual observation provides and lay the basis for more comprehensive studies. The results of the four studies have been summarized in Table 1.

Study 1

Wood and Hill (1983) investigated the relationship between teacher ratings of the aversiveness of interventions and the frequency with which they reported that they used them. *Aversiveness* was conceptualized to be the behavior suppressing or punishing quality of interventions and was operationalized by having the teachers in the investigation rate the interventions for perceived aversiveness. The central interest was in establishing aversiveness of interventions as rated by teachers.

The subjects were teachers enrolled in a graduate level class on methods for educating students with emotional/behavioral disorders. As in the other investigations to be discussed, all were already licensed as regular elementary or secondary teachers (a prerequisite for special licensure as a teacher of emotionally/behaviorally disordered students in Minnesota), and most had several years of classroom experience. While there are limitations inherent in using such a population for rating interventions, one important advantage is the higher than average understanding of the nature and potential impact of the interventions rated.

The teachers in this study rated a list of 30 commonly used interventions as differing in level of aversiveness and reported more frequent use of less aversive interventions. A factor analysis produced two principal factors. One, labeled *mild interventions*, included 16 verbal and nonverbal interventions that tended to be rated lowest in aversiveness. The second principal factor included interventions that were rated as being more aversive and were characterized by physical interference with students' freedom of movement or possessions. This factor was labeled *strong interventions*. A third factor consisting of only two items also emerged. When forced, these items were clustered in the second factor, but since they appeared to be conceptually related to each other, they were grouped as *strong verbal interventions*.

These findings appear to be consistent with those from research done by others. Witt, Elliott, Martens, Peterson, and their colleagues have studied the *acceptability* of interventions and published a number of papers based on this conceptualization of a different key factor in intervention choice. These researchers built on the research of Kazdin (1981) who had studied the acceptability of interventions to child patients, parents, educators, and institutional staff, although the perceived aversiveness of the interventions was not measured. In general, Kazdin found that interventions the researchers considered more restrictive or aversive were rated less acceptable than reinforcing interventions.

In a series of studies, the other researchers expanded the concept of acceptability as viewed by teachers to include such factors as risk to the target student, time required to implement an intervention, effects on other students, and amount of teacher skill required, as well as a general acceptability factor (Elliott, Witt, Galvin, & Peterson, 1984; Martens, Peterson, Witt, & Cirone, 1986; Witt & Elliott, 1985; Witt, Elliott, & Martens, 1984). Their findings show that acceptability is clearly related to choice of interventions, particularly where parent and student preferences as well as pragmatic considerations are involved. This research differs from that reported here in the focus on *acceptability* and the rating by subjects of relatively small numbers of interventions.

Teacher Choice of Effective Interventions

Presumably acceptability of interventions to teachers is related to their perceived effectiveness. Two studies of teacher choice of interventions perceived as effective with students of specific behavioral characteristics have been carried out with the assistance of Maroney, Dorsey, Smith, and Yell. The same major questions were the focus of both studies: Which interventions do teachers view as most effective with students of differing behavior characteristics, and does the aversiveness of interventions chosen vary for students with differing characteristics? A guiding assumption has been that teachers operate from a pragmatic perspective, placing heavy importance on the general "effectiveness" or behavior-influencing results of interventions. The question to be studied was whether they also choose specific interventions as more effective with students having specified behavior characteristics or perceived them as equally effective with all students.

While some association between student characteristics and perceived intervention effectiveness might be predicted, it was not found in a study by Algozzine, Ysseldyke, Christenson, and Thurlow (1983). They reported that, for their sample of teachers, "student characteristics (e.g., immature vs. unmanageable) had no effects on teachers' preferred interventions. . . . This inconsistency suggests that teachers' intervention choices may result from an unsystematic selection process" (p. 193).

Study 2

To study the relationship between student characteristics and teacher choice, Wood, Maroney, and Dorsey (Wood & Dorsey, 1985) developed brief vignettes describing the problem behavior of hypothetical male students. All vignettes used the same basic stem to which were added the six behaviors with the highest loadings from either Factor I (immature behavior) or Factor II (socially defiant behavior) from Algozzine's (1979) study of the disturbingness of behaviors. Age was varied by designating the student as either 7 or 15 years old. Crossing the age and behavior pairs produced vignettes describing the behavior of a socially defiant child, socially defiant adolescent, immature child, and immature adolescent. Behavior characteristics of the pairs remained the same with only the age being varied.

The subjects were teachers similar in characteristics to those of the first study. The set of interventions used in the investigation were taken from the list rated in terms of their relative aversiveness on a scale of 1 to 5 in the Wood and Hill study (1983). From the original list of 30 interventions rated, 20 were selected that represented a range of high to low perceived aversiveness. Examples of interventions that had been rated low in aversiveness are *model desired behavior, change task,* and *physically shake or squeeze flesh of student.* The matching of interventions to the described students was done after the midpoint of a course on methods for use with behaviorally disordered students so that the raters had all been exposed to the same in-class discussion of student behavior characteristics and interventions. In the course, matching of interventions to specific patterns of behavior such as those described in the vignettes had not been discussed in detail.

Matching was done using a Q-sort procedure. After reading the description of the student's behavior, the teachers placed cards, each of which contained a description of an intervention, in a pile as *most, moderately*, or *least* effective for changing the behavior of that student.

Both regular and special education teachers considered student behavior characteristics when making choices between interventions for use with students differing in type of problem behavior, thus differing from the teachers in the Algozzine et al. study (1983). These teachers chose interventions perceived as lower in aversiveness as most effective for students whose behavior was immature, and stronger, more aversive interventions as least effective with this group. As a group they appeared less certain about which interventions would be most effective with socially defiant behavior, and the interventions they perceived as effective for use with defiant students tended to be those that had been rated higher in aversiveness by the teachers in the Wood and Hill study (1983). In general, there was evidence that younger socially defiant students were more likely to be targeted by teachers for strong aversive interventions than any of the other three students. These results will be further discussed in relation to the findings of the next study.

Study 3

Assignment of labels. The method of developing the vignettes for Study 2 has already been described. However, it is obvious that most students do not fit neatly into rating scale factor categories. Social defiance is seldom a "pure" characteristic, often being associated with immaturity or periods of social withdrawal. Therefore, for Study 3 it was decided to have teachers rate the applicability of the commonly used labels *emotionally disturbed, behaviorally disordered,* and *socially maladjusted* to six male students described in vignettes as displaying various combinations of problem behaviors. Vignettes were developed describing the behavior of six boys, three upper elementary and three younger adolescents.

These vignettes were then given to a large group of teachers similar in background to those in the earlier studies. Each teacher was asked to rate on a 5-point scale the applicability of the labels *emotionally disturbed, behaviorally disordered,* or *socially maladjusted* to four different students. (The six vignettes were randomly given to overlapping groups of teachers so that all six were rated.) Again, the ratings were done just after the midpoint of the course so that discussion of the characteristics of students with behavioral disorders had taken place and a variety of intervention procedures had been discussed. The results have been described in a conference presentation (Wood, Dorsey, Smith, & Yell, 1987).

The ratings indicated that teachers defined emotional disturbances and behavioral disorders more narrowly than social maladjustment. Students who had been described as showing more signs of unhappiness and inner stress or bizarre behavior were given higher emotional disturbance ratings. Students showing more frequent aggressive acts against persons or property were given higher behaviorally disordered ratings. Ratings of social maladjustment, as a more generic label, were associated with both the other ratings. In general, the overlap of ratings was considerable.

Ratings of intervention effectiveness. For the intervention choice stage of this investigation, only four of the vignettes were used. The vignettes chosen were those for the two students who had relatively high ratings as emotionally disturbed and relatively low ratings as behaviorally disordered, and the two students who had relatively high ratings as behaviorally disordered and relatively low ratings as emotionally disturbed.

During the discussion of the findings of Study 2, teachers who had done the sorting of the interventions suggested that there is a difference in the effectiveness of interventions for (a) managing behavior and (b) promoting social and emotional adjustment. Therefore, in this part of Study 3, teachers were asked to rate the effectiveness of each of the 20 interventions rated in Study 2 for these two different purposes on a 5-point scale ranging from *not at all effective* (1) to *very effective* (5).

The results indicated that the teachers rated the interventions as more effective on average with younger than older students and as more effective for managing behavior than for improving social and emotional adjustment. Overall, the interventions were rated as being most effective for managing the behavior of the young behaviorally disordered student. The teachers differentiated between the effectiveness of specific interventions for managing behavior in contrast to promoting social and emotional adjustment. On the whole, more aversive interventions were seen as less effective for promoting social and emotional adjustment. Most of the interventions perceived as more effective are among those rated lower in perceived aversiveness by the teachers in Study 1. The interventions rated as effective for the younger behaviorally disordered student tended to be those previously rated as more aversive than those seen as effective for the older students or the younger student whose behavior was described as emotionally disturbed.

Comparisons Between Studies 2 and 3

The interventions perceived as most useful for managing the behavior of all students were those rated by teachers as relatively lower in aversiveness. More aversive interventions are considered effective with behaviorally disordered students, especially younger behaviorally disordered students, by some teachers.

Taken together, the results of Studies 2 and 3 provide strong evidence that unlike the teachers in the study by Algozzine et al. (1983), these teachers did consider student behavioral characteristics in deciding about intervention effectiveness. In general, the teachers seemed less confident of the effectiveness of specific interventions with defiant or behaviorally disordered students, as shown in more variability in their ratings of intervention effectiveness in these cases. They also were more confident that the interventions would be effective for managing behavior than that they would be effective for improving social and emotional growth, and that they would be effective with younger in contrast to older students.

Study 4

Analysis of data from Study 4, a recently undertaken pilot investigation, casts some light on a different but related issue of teacher perceptions of interventions and their possible use. A topic of much current interest is teacher perceptions of the interventions that can be used by regular classroom teachers to manage problem behavior. It is generally agreed to be desirable to maintain students with special needs, including those who are emotionally or behaviorally disordered, in regular classrooms whenever possible. Reynolds (1988), a strong advocate of what has been called the Regular Education Initiative, states the issue very clearly: "It is the responsibility of the placement team that labels and places a child in a special program to demonstrate that any differential label used is related to a distinctive prescription for educational practices and that these practices are likely to lead to improved outcomes not achievable in the regular classroom." To respond to this challenge, educators must know which interventions can be applied in the regular classroom and which require special settings. What teachers in general perceive as possible, appropriate, or effective may be as important in the answer as what may be demonstrated as possible or effective in special demonstration projects. But to date, little information has been gathered about how teachers perceive the appropriateness of interventions for use in regular classrooms.

To help answer this question, a group of teachers similar to those making up the populations in Studies 1, 2, and 3 were asked to rate two expanded lists of interventions, including all 20 that had been used in the earlier studies. The two lists included (a) *preventive intervention strategies (N:21):* those that make occurrence of problem behavior less likely and teach approved social behavior; and (b) *reactive intervention strategies (N:31):* those used to manage incidents of problem behavior when they occur. The raters were asked to assume that they were recommending interventions to be used by a teacher instructing a regular class of approximately 30 students in an academic subject. The context was further established by instructions to the raters to rate each of the interventions in terms of its impact on two major features of the classroom social environment: teacher and "other" (nontarget) student attention to task. Specific features were defined as: *D/T:* Distracts teacher from responsibility for directing learning of group as a whole. Amount of attention teacher must give to correctly implement the intervention. A high degree of distraction or great amount of attention required is rated 5. *D/OS:* Distracts other students from learning tasks. Implementation of intervention tends to take their attention away from their learning tasks. A high degree of distraction of attention from task is rated 5.

A relatively small number of preventive interventions were rated as low (arbitrarily defined as < 2.5 on the 5-point scale) in disturbing effect on teacher attention to instructional tasks. Among them were: schedule of activities posted, classroom space structured, expectations/rules posted, daily review of plans with class, and plan for monitoring bus behavior. Setting of goals and monitoring of their attainment with students and the use of points and levels systems were rated as moderately disturbing in effect (rated between 2.5 and 3.0), while social skill training, behavioral contracting, and counseling of students were seen as highly disruptive (rated as > 3.0). Most of the 21 preventive intervention strategies were rated as having low or moderate distracting effects for nontarget students.

Many of the 37 interventions used for managing problem behavior when it occurs were rated as more disturbing to both teachers and students. Teachers were seen as highly distracted from their primary responsibility by the need to verbally counsel, verbally threaten, physically restrain, or use seclusion timeout with students. Such interventions were also seen as having moderate to highly disturbing effects on the attention to task of nontarget students.

Comparisons with Results of Previous Studies

The results of Study 4 add another dimension to the patterns shown in the previous studies. Teachers in those studies rated certain interventions as more aversive than others and also indicated that they perceived the more aversive interventions as less effective for producing social and emotional growth in students than for managing behavior. The teachers in Study 4 indicated that they perceived these same interventions as also more distracting to teachers and other students when implemented than less aversive interventions. It is this group of highly aversive interventions that are most disruptive of the teaching/learning process. What implications do these findings, albeit tentative, suggest for teachers of behaviorally disordered students?

CONCLUDING COMMENTS

The studies reported questioned teachers about their perceptions of intervention effectiveness and their choices among interventions for effectiveness with specified students and in specified situations. The results help explain why teaching behaviorally disordered students is so emotionally demanding: The students placed in programs for the emotionally disturbed and behaviorally disordered are those whose behavior cannot be effectively managed by interventions used in regular classroom settings. The interventions teachers perceive as necessary for managing their behavior tend to be those rated as more aversive. These are also those whose use interferes seriously with teachers' teaching and other students' learning. Furthermore, teachers are not at all certain that these interventions are effective in promoting social and emotional growth in students, an objective whose attainment would be truly satisfying and fulfilling. They rate them as more effective for controlling student behavior than for producing learning and growth.

Thus, characteristic of the "professional practice" of teachers of behaviorally disordered students is the need to use highly aversive interventions that they believe may control inappropriate behavior but are unlikely to teach appropriate behavior. Such a perception may well undermine the special teachers' sense of professional accomplishment. To the extent that teacher behavior in the regular classroom is the professional norm against which they judge themselves, teachers of the behaviorally disordered are aware that they are using interventions that they themselves rate as incompatible with this norm. The results of these perceptions may be stress in addition to that resulting from work with student problems themselves.

The study of teacher perceptions is informative and helpful. Ideally, such questionnaire studies of teacher intervention choice should be complemented by direct observation in classrooms. However, the direct observation of teacher use of the more aversive interventions, even at the global level at which it is cost effective, is complicated by the relatively low frequency and lack of predictability of their use. Given time and resources, those interested in this topic may have more to share in the future. In the meantime, questionnaire research such as that described in this report helps teachers share with one another information about their choices and helps researchers to make inferences about the perspectives that shape those choices.

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Highlighting Analysis in Applied Behavior Analysis: Designing and Analyzing Single Subject Research

Richard E. Shores

ABSTRACT

This article presents issues and concerns that have been raised based on the author's review of applied behavior analysis research in the field of special education. Included is a discussion of alterations in the two basic single subject experimental designs that have recently emerged. These alterations in designs have been labeled as a result of tactics of manipulation of independent variables or methods of collecting data. Several problems are discussed in using the single subject designs, particularly in evaluation and research without attending to experimental control procedures and replication of data. This article stresses the importance of planning studies to provide for direct and systematic replication of experimental effects by systematic control of potential sources of variability. A situational analysis is presented to aid in planning research so as to eliminate potential experimental error (i.e., uncontrolled variability) prior to implementing studies.

The purpose of this article is to discuss issues and concerns that have arisen from the author's reviewing studies in the area of applied behavior analysis that have been submitted to various journals in the field of special education. In addition, a model is presented that should aid in both designing and analyzing research using applied behavior analysis tactics.

Applied Behavior Analysis

The major purpose of any research is to identify sources of variability which lead to more exacting control and prediction of behavior. Applied behavior analysis (ABA) research in special education is most often conducted to analyze variables that effect socially important variables (Baer, Wolf, & Risley, 1968) that lead to improved educational practices. ABA research typically utilizes single subject research tactics originally designed by those in experimental analysis of behavior (Sidman, 1960). As Baer et al. (1968) stated, "An experimenter has achieved an analysis of behavior when he can exercise control over it" (pp. 93-94). Technically, ABA research utilizes closely controlled experimental designs in which observations to behavior are completed under precise experimental controls to study functional relationships of behavior to the environment. Functional relationships are established through, within, and/or across subject replication of the experimental effects (Sidman, 1960). The more

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precisely the behavior is controlled (demonstrated experimental control of the dependent variable through replication), the more precise the prediction of the effect (i.e., the significance of the prediction). It is through direct and systematic replication of experimental effects that a body of knowledge regarding behavior is developed (Sidman, 1960; Skinner, 1953).

In the early development of ABA, Baer et al. (1968) indicated that there were two basic designs for ABA research. The reversal design (demonstrated replication of the effects of the independent variable through reversal of the data to original baseline levels and reinstatement of the original effect) and the multiple baseline designs (demonstrated replication across responses or subjects). More recently, variations of these designs have emerged.
Figure 1 presents the two basic designs discussed by Baer et al. (1968): the reversal and multiple baselines and the variations of these designs. The later variations have labels that indicate the tactics of manipulation of independent variables (e.g., withdrawal of treatment design) or method of data (e.g., multiprobe design), but all the designs provide for direct replication of experimental effects within and across subjects.

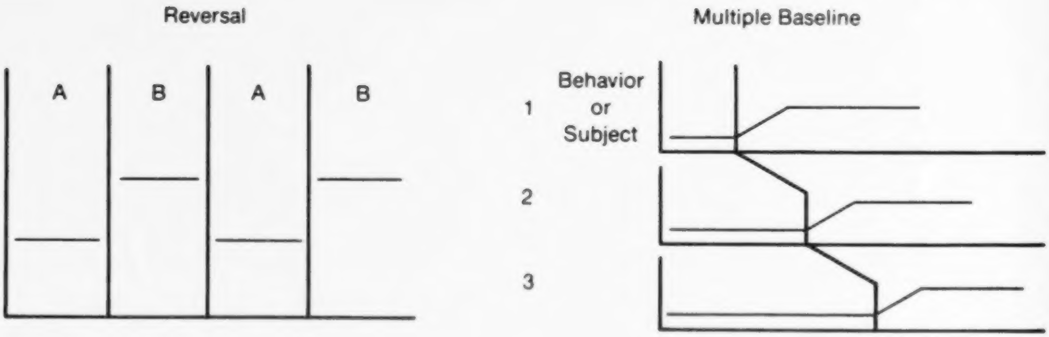
Reversal Designs

The most powerful demonstration of control is the reversal design. The rationale for the reversal design was based on the fact that experimental control of the independent variable was sufficient to reestablish baseline levels of behavior. Unlike the laboratories of the experimental analysts, the applied behavior analyst's laboratory was in applied settings and therefore, with many uncontrolled variables, behavior wasn't always easy to reverse by simply removing the intervention. In addition, other experimental control procedures necessary to reestablish baseline performance (i.e., reversing the behavior) were oftentimes considered unethical (e.g., use of aversive control) and/or contra therapeutic (e.g., withdrawal of treatment for self-injurious behavior). Therefore, it has become an acceptable demonstration of control to have the behavior only reverse to approach baseline levels, or at least go below (or above) the level established during the first intervention. Replication is demonstrated when the behavior is reestablished to at least the level of the first intervention condition. Today this design is often labeled as withdrawal of treatment design or multitreatment design (if more than one treatment is being investigated). It is still a reversal design in that a reversal implies that rate of the behavior has been directly replicated within subjects. Other reversal *design(s)* are similarly labeled based on control of the independent variable. One book discusses the "true reversal design" as one in which contingencies of reinforcement are reversed (Hersen & Barlow, 1976). This is one tactic of control to reverse the response, but certainly not the only available tactic. Other contingency control tactics may also be used (e.g., DRI, DRO) to aid in reversing the behavior to baseline levels.

Multiple Baseline Design

The multiple baseline designs were a result of the early experimental analysts' search for methods of replicating effects when the behavior being studied was either irreversible or difficult to reverse, or when the purpose of the study was to analyze more than one behavior or condition (Sidman, 1960). The design required multiple responses all of which were systematically brought under

Figure 1. *Single subject research designs*


Reversal
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B
A
B
Multiple Baseline
Behavior
or
Subject
1
2
3

"Designs" Labeled without Reference to Effects

Reversal by Method of Manipulation

- Withdrawal of Treatment
- Reversal of Contingencies
- Multitreatment Design

Multiple Baseline by Method of Data Collection

- Multiple Probe
- Alternating Treatment
- Simultaneous Treatment
- Changing Criterion
- Multitreatment

control of the experimental variables within subject, or across subjects to produce reliable (i.e., replicable) data.

As the author stated earlier, terms to describe variations of the multiple baseline design have labels based on tactics of either observation or tactics of control. For example, the multiple probe design is called multiple probe because data are taken on different legs of a multiple baseline at infrequent intervals. The design is a multiple baseline, the method of collecting data is a probing tactic. Replication is demonstrated across behaviors or subjects. The multitreatment, alternating treatment, and simultaneous treatment designs are labeled by the application of treatment based on meeting specific criterion for a single behavior and increasing the criteria. The replication in all three designs is accomplished by systematic implementation of the intervention across behaviors within subject or across subjects.

Problems

It's not that the above designs are inappropriate for certain questions, rather a potential danger is in considering many of these tactics of research as designs in the same way one may consider an analyses of variance design. Often problems are stated in a way to fit the design (i.e., stating the null hypothesis) with the different phases viewed as separate groups or conditions without attending to the importance of replicable data.

The author recently reviewed a study which was an example of using single subject designs to investigate the null hypotheses. Five subjects were given access to microcomputers for a short amount of time each day to augment their mathematics instruction. Data were taken on daily math worksheets for each of the subjects. The design used was the withdrawal of treatment design. All subjects received 10 days of baseline, 10 days of treatment, with 5 days return to baseline conditions and 5 days return to treatment. The data indicated that for three of the five subjects, an accelerating baseline was obtained prior to the implementation of the microcomputer intervention. The other two subjects in the last 3 days appeared to have stable data. The implementation of the microcomputer produced small changes in correct performance as indicated by the difference in means of the conditions. When the microcomputer was removed and then reinstated, little change was evident in the data. However, the means were drawn for baseline and treatment conditions. These means suggested that there was a slightly higher level of performance during treatment as compared to the preceding baseline conditions. The authors stated that microcomputers were effective in teaching mathematics to this group of youngsters. However, there were no systematic replications of the effects; therefore, the results were not conclusive.

A number of problems are apparent from the outline of the above study, any or all of which may contribute to the lack of demonstrated effects. For example, all subjects received the same number of observations (days in baseline and treatment) even though baseline data for some of the subjects were not stable. The purpose of baseline data is to predict. If the data are not stable, they are not predictive. Not all subjects obtain stable rates at the same time. In fact, each subject's data must be assessed independently in single subject research. The failure to reverse by removing the computer activity prevents any suggestion of a direct effect (functional effect) of the computer on the dependent variable, even for the subjects that had some effects. Very possibly, a better design to investigate the question would have been a multiple baseline to demonstrate replication. Finally, other variables may have influenced the data for some subjects that were not controlled by the experimenters which increased the variability of performance.

Problems such as the above may be reduced by more carefully planning studies to analyze behavior. This planning should include developing reliable and appropriate measurement systems and accounting for as many of the potential compounding variables as possible before deciding what design is appropriate to demonstrate replications.

The remainder of this article describes procedures my students and colleagues use to aid us in designing ABA studies (as well as designing behavior modification programs) that aid in accounting for potential confounding variables.

Designing and Analyzing Research: Identifying Potential Sources of Error

The purpose of the procedures we use is to identify potential sources of error which may increase variability of behavior prior to implementing the study. We view uncontrolled variance as experimental error (Sidman, 1960). Therefore, when we design a study we try to design it in a way that eliminates as much of the potential experimental error, and therefore variance, as possible. It should also be noted that in designing experiments, we try to manipulate only one variable while holding the rest of the identified variables constant.

Table 1 presents an outline of what we have labeled a *Situational Analysis*. The intent of using this outline is to analyze the environment and the *targeted* behavior or response in a narrative format. Table 1 is an adaptation of Lindsley's (1964) prothesis of retarded behavior and subsequent Is/Does planning sheet (White, 1971). The situational analysis forms the beginning of designing experiments; it allows one to analyze the experimental conditions, using principles of behavior.

As a first step, we are concerned with defining the response or the *movement cycle*. A movement cycle is observable and measurable and is defined in terms

TABLE 1

Situational Analysis

Setting Events	Antecedent Events	Movement Cycle	Arrangement	Subsequent Event
Those events that may increase or decrease the power of the S^D or consequences	Those events that may serve as S^D's that directly set the occasion of the movement cycle	The dependent variable: observable and measurable frequency and/or time $\frac{F}{T}$ $\frac{F}{F}$ $\frac{T}{R}$	The relationship of the MC to SE, time or frequency	Event which is intended as consequence

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of either frequency or time, or a combination of the two (i.e., time over time, or percentage time; frequency over frequency, or percentage of the frequency; or frequency over time, or rate).

Subsequent events follow the movement cycle and are potential consequences of the response which may seem to alter the response rate. The arrangement is the relationship of the movement cycle to the subsequent events. This arrangement is expressed in direct relationship to the operational definition of the response. If the response is defined in terms of time, then the arrangement of subsequent events must also be defined as time (an interval schedule of reinforcement). If the movement cycle is defined as a frequency, the arrangement is likewise defined as a frequency (a ratio schedule of reinforcement).

Antecedent events are those environmental events which precede the behavior and set the occasion for the behavior to occur. There is a direct relationship between the antecedent event(s) and the occurrence of the response.

Setting events are those events that may increase or decrease the power of the stimuli or the consequences. Setting events include: the time of the experiment, the general description of the environment in which the experiment is conducted, the people who are associated in that environment, and any materials that are necessary to either present the antecedents or subsequent events and/or measure the behavior. In classrooms, seating arrangements, size of room, and so forth are also potential setting events. In addition, although not technically setting events, there are personal states that should be accounted for. Personal states include deprivation or satiated states, fatigue states, drug states, emotional states, and so forth.

In analyzing our research we attempt to fill in the situational analysis with the specifics as they relate directly to the problem being studied. It is important that each of the components of the situational analysis be completed. In the event of omission or incomplete description of the setting events, antecedent events, arrangement or subsequent events, and/or imprecise definition of the response, potential sources of error have been identified and need to be clarified before the experiment is initiated. (See Table 2 for potential sources of error.)

Movement Cycle

The operational definition of the movement cycle is critical in designing studies. It's critical because it specifies the behavior being analyzed. The definition also leads directly to defining the arrangement and the antecedent events.

Measurement of behavior may occur along two continua as indicated in Figure 2. These are a direct to indirect continuum and a continuous to discontinuous continuum. The direct to indirect continuum refers to how data are recorded and is important in terms of both reliability and validity. The more inference one needs to record the behavior the less reliable and potentially less valid is their measurement system. The continuous-discontinuous continuum refers to the frequency with which the data are taken. A major source of error may occur in moving to more discontinuous systems. Discontinuous systems require sampling procedures (e.g., probing techniques) and therefore may produce sampling bias, again potentially reducing reliability and validity of the measurement. We try to get as close to direct and continuous data collection systems as possible.

Systems of assessing reliability are also potential sources of error. Reliability is accounted for in most ABA research by the interobserver agreement method

TABLE 2

Source of Errors

Setting Events	Antecedent Events	Movement Cycle	Arrangement	Subsequent Event
Changes in Environmental States: Time Place (physical environment) People Material Special instructions *Changes in Personal States:* Deprivation Satiated Fatigued Emotional Drugged (legal or illegal) *Changes in Other Physiological States:* Seizures Medical conditions etc.	Defining the specific S^D that sets the occasion for the response Confusion of SE with the AE	*Errors of Measurement* Sampling rather than direct and continuous Too low interrater agreement Procedures in calculating reliability	No relationship Schedule strain extinction Too rich satiation	Event has little or no reinforcing/punishing effects Too small an event (extinction) Too much of an event (satiation) Event interferes with reproducing the movement cycle (consuming the event)

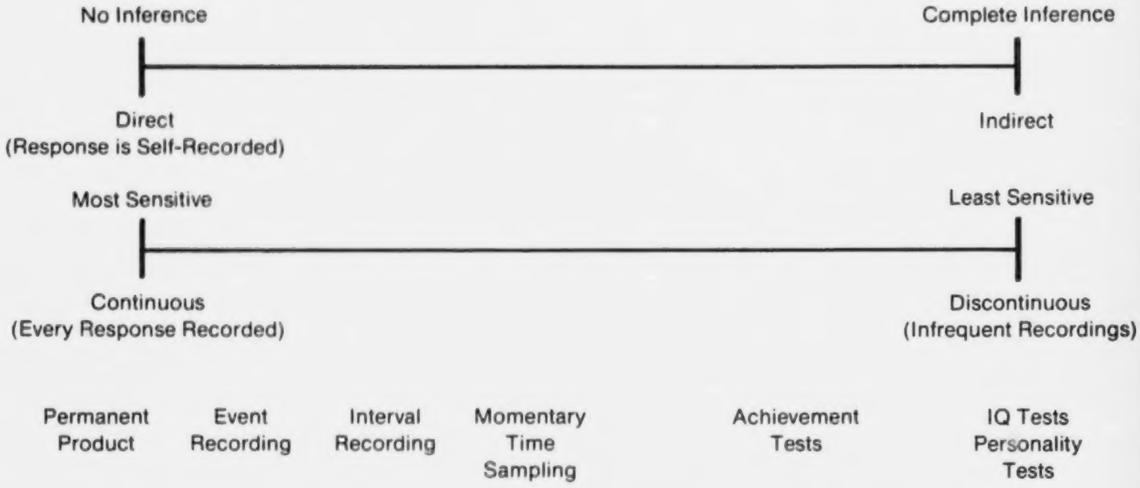
No Inference
Complete Inference
Direct
(Response is Self-Recorded)
Indirect
Most Sensitive
Least Sensitive
Continuous
(Every Response Recorded)
Discontinuous
(Infrequent Recordings)
Permanent Product
Event Recording
Interval Recording
Momentary Time Sampling
Achievement Tests
IQ Tests Personality Tests

Figure 2. *Continua of measurement systems. Measurement systems operate along continua of direct/indirect and continuous/discontinuous Permanent Product System as direct/continuous results with little inference and highly sensitive IQ test and personality test are indirect and discontinuous results are highly inference and are insensitive.*

with two or more people recording the same thing at the same time. If two people record the same things at the same time, there is little or no reason to suspect reliability as a major source of error. Unfortunately, and possibly often unavoidably, many ABA studies report assessing reliability by using forms other than this direct reliability method. Typically, this is due to the time frame in which the reliability is assessed. The "same time" may be over a long period of time (e.g., 10 minutes) rather than direct and continuous; therefore, people report reliability as frequency or time of one observer over the frequency or time of another observer. These systems do not directly assess whether the two observers observed the same behavior at the same time, but rather assessed only the relationship of each observer's frequency of recording the behavior over an extended period of time. Such procedures are useful only if the experiment has sufficient replications to demonstrate experimental control.

A number of other sources of error in data collection (e.g., observer drift) need to be monitored and corrected, if possible, before the study begins. Johnson and Bolstad (1973) discussed several of the more important sources of measurement error associated with direct observation and provide excellent recommendations for controlling the problems. Among their recommendations is the use of direct and continuous assessment of reliability.

A major point to be made is that the operational definition of the movement cycle may be a potential source of error when designing and interpreting research. In addition, defining the movement cycle leads to defining other components in the situational analysis. Direct and continuous measurement systems decrease the amount of inference necessary thereby increasing reliability and validity. Likewise, direct and continuous assessment of reliability decreases many of the other problems associated with direct observation procedures.

Arrangement

Many ABA studies are concerned with the arrangement of subsequent events of systematic control of reinforcement (i.e., contingency management) as a controlling variable. However, when studies are focused on one of the other variables (e.g., the antecedent), uncontrolled arrangements may be a major source of experimental error. Controlling the arrangement (i.e., using appropriate schedules of reinforcement) aids in establishing stability of the data, thereby producing more predictable data.

As stated earlier, it is impossible to separate the operational definition of the movement cycle from the arrangement. The operational definition of the movement cycle dictates the arrangement of the subsequent events. Therefore, one of the more common sources of error originates from the operational definition of the response(s).

An analysis of the arrangement provides several other potential sources of error in experimental control even with a valid and reliable measurement of the response. The first and most obvious is that the relationship between the movement cycle and the subsequent event simply is not apparent (reinforcement is noncontingent). Other sources of experimental error may be due to extinction of satiation phenomena. For example, when the arrangement between the movement cycle and the subsequent event is too distant (a lean schedule of reinforcement) extinction of the response may occur. On the other hand, it is possible that the arrangement is too rich or too often, thereby producing satiation effects. These sources of error often become apparent through careful and frequent examination of the data.

Subsequent Events

The most obvious potential source of error associated with subsequent events is when the events simply have no reinforcing or punishing value for the subject. For subsequent events to have reinforcing or punishing value they must be in the proper amounts. Too little or too much of the event may produce extinction or satiation which may effect experimental control. Finally, some events used as reinforcers actually interfere with reproducing the movement cycle, creating a *consuming phenomena.* The prime example is using edibles as reinforcing events and measuring the rate of production of verbal behavior.

Reinforcement and punishment are technical terms that state that the behavior is controlled. Often times, the effects of the subsequent event (particularly reinforcing events) should be established prior to beginning the experimental manipulation(s) of other variables.

Antecedent Events

Antecedent events are those variables which precede the movement cycle and are intended to set the occasion for the movement to occur. Once it is predictable that the response will occur in the presence of the antecedent event, the event is known as a discriminative stimulus (SD). Possibly one of the major sources of error in many of the studies I have reviewed is due to unspecified SDs that actually set the occasion for the response. As with the other variables, the unspecified SD often relates directly to the operational definition of the movement cycle. For example, when the movement cycle is vaguely stated, the identification of actual antecedent events may be impossible to discern.

Another major source of error lies in compounding setting events with the antecedent events. For example, I have often reviewed studies that confuse special instructions to a child which actually are intended to clarify the relationship between behavior and its consequences (e.g., complete your work and then you can play) with the SDs of academic materials. Specific SD-R relationships must be established in most of the work to study academic performance. Therefore, systematic control of the setting, antecedent and subsequent events, as well as the arrangement is required to study academic performance. Too often, the variables identified in the situational analysis are left uncontrolled, producing uncontrolled variability in the data.

Setting Events

Setting events are those events that increase or decrease the power of the stimuli and/or consequences. These events include a description of the general environmental conditions under which the data are collected. Such variables as the size of the room, the number of people present, location of the subjects in the setting, and materials that must be available in order for the antecedent or consequent events to occur (reinforcers) may increase or decrease the power of the stimulus or consequences.

Intrapersonal states, although not technically setting events, may influence responses very much like setting events. The general emotional state of the subject (e.g., angry) as well as the physical state of the subject (e.g., fatigued) may increase or decrease the power of stimulus and consequences.

Setting events (and personal states) may be situational (e.g., may happen only once during the experiment) or they may be prevailing. If they are prevailing, they need to be identified before the experiment begins or as early as possible in the experiment and additional controls be developed to control them. If setting events are situational or infrequent, the researcher needs to be prepared to either set additional controls or at least note when the behavior occurs during the experiment.

Experimental Design

The experimenter needs to take into account each of the components of the situational analysis to assess potential sources of errors in order to produce replicable experimental effects. The experimental design emerges from this type of situational analysis. The question of design is always in relationship to replicability of the results by manipulating only one of the major variables (setting event, antecedent event, arrangement, or subsequent event) and controlling the others. Whether one uses the reversal or multiple baseline design or a combination is dependent on what is the most expedient and believable to produce replicable data (Sidman, 1960). In other words, the specific design is chosen or developed based upon the decision to conduct the experiment to study the question with sufficient replications to produce reliable results. To increase the probability of obtaining replicable data, the experimenter should continuously monitor the experimental conditions (i.e., the situational analysis) and make appropriate changes based on the analysis.

Research on Package of Instruction

The preceding discussion has been concerned with the design of studies to experimentally analyze behavior by systematic control of environmental variables. Many recent studies using ABA research methodology in special education has been more concerned with evaluation of the effects of instructional *packages*. These packages most often have been developed without an experimental analysis of events that effect the behavior of interest. Many of the articles the author has reviewed which have used packages of instruction manipulate the setting events, the antecedent events, the arrangement, and the subsequent events at the same time to demonstrate effects of the packages on child behavior. The analysis of the package generally is in relationship to the changes in child behavior with and without the package. I will not dispute the importance of that information the studies have provided. However, by comparing package conditions to no package conditions, no analysis of the controlling variables can be made. The results of these studies indicate only whether the child(ren) responded differently under two conditions. Why the effects occur (or maybe more importantly, why they don't) is unknown.

It seems obvious that such packages should be based on analysis of the behavior the packages are trying to develop. Unfortunately, this is not often the case. Currently there seems to be less behavior analysis research and more package research using ABA research strategies. Barrett (1987) discussed this increasing trend of ABA research toward the evaluation of the question of package in place of analyzing behavior. Barrett's answer to "Why do we have this trend, when so little is known about behavior?" was "What makes a package effective seems to be of little import when one's professional community dictates precedence of social over scientific validation and thus fails to support the necessary analysis" (p.269). In other words, package development is a highly reinforced behavior; understanding behavior phenomenon is not.

CONCLUSION

ABA research should account for as many of the controlling variables as possible. The analysis of behavior is not accomplished by one research study. To develop the science of ABA requires carefully designed and programed research. Only through a program of systematic research can we understand the influence of environmental events on behavior. Systematic research is a necessity for us in the field of education and treatment of behaviorally disordered students to have a scientific basis that will enable us to predict and control behavior and thereby improve our educational practices.

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The Promise and Pitfalls of an Ecological Perspective on Children's Behavioral Disorders

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Early attempts to assess internal states or personality constructs contributed little to knowledge of children's behavioral disorders. Later, a succession of studies conducted on deficits linked to categories of exceptionality failed to yield precise information on management or instruction. However, beginning in the 1960s, a surge of interest in an operant approach ushered in a new era in treatment and education of the behaviorally disordered.

Initial efforts were largely devoted to treating single discrete behaviors in laboratory or clinical settings. Although more productive, the so-called *narrow focus* of early behavior analysts prompted a call for a more ecological systems approach (e.g., Willems, 1974). Adding some credence to this call was accumulating evidence that problem behavior is not only often transitory (Kauffman, 1985) but also that there is a situation-specific quality to many children's behavioral disorders (Gable & Strain, 1979). Other studies brought into question the issue of support for changes in behavior and the realization that few changes will endure without systematic programing (Nelson & Rutherford, in press). Recognition grew that a search for understanding of behavior involves aspects of the environment — "the interaction between the child and the environment is continuous, reciprocal, and interdependent" (Bijou & Baer, 1978). Today, *environmental determinism* is recognized as the cornerstone upon which rests the bulk of contemporary behavioral interventions (Hendrickson, Gable, & Shores, 1987).

In the past, changes in thinking were largely supported by intuitive appeal and in reaction to a flawed mental health system. More recently, growing empirical evidence has confirmed the wisdom of a combined ecological and behavioral approach. The purpose, therefore, of this article is to discuss factors that support an ecobehavioral approach to assessment and treatment of children's behavioral disorders.

Part I begins with a brief overview of the disciplines of behavior analysis and ecological psychology. Second, various factors emerging from the behavioral research which may impinge on assessment and treatment decisions are discussed. Issues associated with environmental assessment and treatment that include the concept of setting events are presented. The importance of programing for the generalization of behavior change is underscored. In Part II, the authors offer some modest proposals for remedying present shortcomings of an ecobehavioral approach. Some implications regarding assessment and treatment of behavioral disorders are discussed.

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PART I: PAST-TO-PRESENT SUPPORT

Behavior Analysis and Ecological Psychology

The fields of behavior analysis and ecological psychology have long shared a common assumption, namely, that "behavior is determined by its environmental context" (Rogers-Warren, 1984). In their classic article, Some Current Dimensions of Applied Behavior Analysis, Baer, Wolf, and Risley (1968) set the standard for conceptualizing the emerging science of behavior analysis and underscored its applied nature. Behavior analysis focuses on stimuli controlling behavior as well as contingencies of reinforcement. Emphasis is on conducting intervention in the natural environment. By comparison, ecologists mainly have sought to describe naturally-occurring environmental relationships and their influence on behavior (Barker, 1968). As Barker (1965) described, ecological psychologists seek to examine behavior settings, properties of the environment, and the causally related systems that emerge.

Impetus for incorporating an ecological perspective arose from published calls for behavior analysts to expand their perspective (Willems, 1974) as well as from pressure within the behavioral field itself (cf. Rogers-Warren & Warren, 1977). As Rogers-Warren (1984) pointed out, interest stemmed from the fact that a small number of studies had documented the unanticipated effects of behavioral interventions. Documentation of changes in behavior that were outside the focus of treatment raised concern and sparked interest in an expanded view of assessment and intervention. In linking the two, Rogers-Warren (1984) discussed a continuum ranging from molecular to molar that represented the behavioral and ecological perspectives, respectively. Behavioral disorders would be viewed as residing within the continuum of family, school, and community ecosystem (Rhodes, 1967). Even so, combining perspectives has not led to removal of all obstacles to assessment and treatment of children's behavioral disorders.

Situational Context of Behavior Problems

Accumulated evidence has borne out the fact that children categorized as behaviorally disordered sometimes display deviant acts across a limited number of settings. For example, Patterson (1982) found that aggressive teenagers are less likely to engage in overt acts of aggression in the home than in the community. In a related investigation, Wahler (1969) noted that children judged to be highly disruptive and noncompliant at school may not display these behaviors at home. Children whose interactions with parents are characterized as oppositional may be quite appropriate in the school setting. In yet another study, Strain and Ezzell (1978) reported dramatic and consistent differences in the frequency of disruptive acts of teenagers across settings within a residential center. They found that the pattern of disruptive/inappropriate acts varied according to the specific response topography that initiated such activity. Variability of behavior was associated with differences in structure and expectations (Strain & Ezzell, 1978). These and other studies underscore the situational context of behavior and the importance of obtaining precise information on behavior from various clinically-significant settings.

Unanticipated Outcomes of Treatment

A behavioral approach to treatment of children's behavioral disorders has advanced from focusing on "one behavior at a time" (Voeltz & Evans, 1982) to attempts to deal with multiple responses (Kazdin, 1985). Recent studies have revealed that rather than occurring as isolated acts behavior actually may be organized in response classes. For instance, Wahler (1975) observed two problem youngsters at home and at school for approximately 3 years. He found that the behavioral repertoires of the boys contained responses that covaried predictably. In addition, Wahler showed that there is a reciprocal quality to behavior — problem behavior of the children was functionally associated with other behaviors.

Collateral effects on two or more behaviors have been documented in the social skills literature as well (e.g., Hendrickson, Gable, Hester, & Strain, 1985; Risley, 1968; Strain, Shores, & Kerr, 1976). Treatment conducted in natural settings may produce "response covariation" in which an intervention applied to a target behavior may "spill over" onto other responses within the same "class of behaviors" (e.g., multiple responses which together comprise a prosocial skill). Understanding of the interplay between two or more responses is gained by means of thorough analysis. Yet the bulk of assessment practices ignore the potential significance of obtaining multiple measures of all major sources of environmental control.

The occurrence of side effects — unintended outcomes of behavioral intervention — has been documented (e.g., Wahler & Fox, 1981). Studies show that these side effects can be either positive or negative (Wahler, 1975). For example, a student correctly answers an arithmetic problem and the teacher acknowledges this by offering a statement of praise for "good adding". In this example, teacher-administered praise combines with the response itself to provide feedback to the student. The variables of stimulus response reinforcement interact and may produce unanticipated benefits, for example, the student completes a homework assignment in arithmetic. Correct oral responses become discriminative stimuli for completing homework sheets. Conversely, a series of incorrect answers might suppress the desire to complete the homework assignment.

Covariation may also describe an inverse relationship between two behaviors, such as an increase in appropriate and decrease in inappropriate acts (Parrish, Cataldo, Kolko, Neef, & Egel, 1986). Other studies have underscored the fact that multiple responses that are positively correlated with a target behavior tend to change in the same direction (Kazdin, 1985). For example, Sajwaj, Twardosz, and Burke (1972) reported that imposition of a contingency management system reduced a preschoolers' nagging and it also increased verbal initiations and level of cooperative play. In comparison, the child became more aggressive with adults.

From these and other studies, it is clear that possible changes in nontarget behavior must be assessed along with those occurring in target responses. Logical as this may seem, the relationship between behavioral episodes and their controlling conditions is often unclear.

The Significance of Setting Events

Such factors as behavior variability, collateral behavior change, and the reciprocal effect of behavior on the environment may be partially understood by applying the concept of *setting events* (Kantor, 1959). Setting events constitute the contextual conditions in which individual-environmental interactions take place. They do not control behavior completely; rather, they set the occasion for increasing the likelihood that certain behaviors will occur (Rogers-Warren, 1984). For instance, setting events have been shown to occasion maladaptive behavior, that is, crowding conditions may lead to disruptive acts (Kratochwill, 1985) and close physical proximity of student desks to bouts of aggression (Axelrod, Hall, & Tame, 1979). However, as Bijou and Baer (1961) pointed out, "setting events are more complicated than the simple presence, absence, or change of a stimulus" (p. 21).

While an interaction may facilitate or inhibit behavior, the assertion that stimulus-response interactions may be temporally distant, has created certain methodological problems in carrying out assessment and treatment efforts. Since present behavior may be linked to a multitude of subtle and complex person-environmental exchanges (Skinner, 1969), it is difficult to know precisely the elapsed time between a "suspected setting event and a particular target behavior" (Wahler & Fox, 1981). Of course this uncertainty regarding temporality of events may be a source of error in assessment. As with any assessment, baseline analysis often leads to somewhat speculative conclusions. Subsequent intervention is aimed at confirming (or rejecting) the assumptions gleaned from the analysis. However, owing to difficulty in "zeroing-in" on possible setting events, the net result can be a limited ability to accurately document the range of factors impinging on an individual's behavior.

Nature of Behavior Change

As can be seen, a number of factors contribute to making ecological assessment and treatment a complex and demanding undertaking. While accumulated literature has amply demonstrated that a range of behaviors can be brought under stimulus control, many times intervention has failed to produce changes that endure and generalize to nontreatment situations. Like Warren (1977) 10 years before, Rutherford and Nelson (in press) in a review of some 5,300 studies found few addressed maintenance and generalization. Even though evidence of planned and programed generalization is limited, Rutherford and Nelson concluded that "a technology of generalization is forming and developing."

Operating from an ecological viewpoint, some behavior analysts have sought to identify variables that serve to produce or inhibit generalization of treatment efforts. Indeed, the characterization of early attempts as "train-and-hope" (Stokes & Baer, 1977) is gradually giving way to more sophisticated and clinically valid efforts to achieve enduring changes in behavior. In that effort, environmental conditions that enhance or impede generalizaton need to be systematically documented. Programing decisions associated with each of these factors should be linked with knowledge of available literature (Rutherford & Nelson, in press; Warren, in press).

By manipulating multiple variables that have been shown to have an independent effect on generalization, "a powerful synergistic effect may be produced" (Warren, in press). The term *synergism* refers to what Willems (1974) viewed as the combined action of discrete elements such that the effect is greater than or different from the single or independent effects of those elements. As Warren (in press) articulated in connection with language generalization, the concept of synergism is analogous to that of generalization because it implies a combined effect greater than otherwise would result. As various authors have discussed, a comprehensive approach to promoting maintenance and generalization is called for but too often overlooked. (Readers interested in a more complete review of behavior analysis and generalization and maintenance are referred to Rutherford and Nelson, in press.)

Summary

The significance of the studies discussed rests with the fact that situation specific and unintended treatment effects, the influence of setting events, and generalization effects are all in a sense manifestations of the same principle: behavior is controlled by multiple antecedents and contingencies that typically interact in complex and often unpredictable ways. Thus, when a behavioral intervention fails to fully remediate a problem, it is shortsighted to blame the individual. Our failures actually indicate that we do not fully understand the controlling conditions. The value of an expanded ecobehavioral perspective will be determined by the extent to which it helps us to identify these variables and then to structure our intervention efforts so that they do succeed. There is ample evidence that this has been a useful perspective for behavior analysts studying behavioral disorders in recent years. What follows is a brief discussion of some of the current implications of an ecobehavioral perspective for assessment and intervention.

PART II: IMPLICATIONS

Implications for Assessment

Although analysis of behavior begins with relatively isolated relations, an important part of the overall process is to show how variables interact (Skinner, 1953). As has been suggested, knowledge of the relationship between single versus multiple responses and the processes underlying the relationships of these behaviors has major implication for increasing our understanding of how to deal with problem behavior (Parrish et al., 1986). Children's problem behaviors must be viewed as the outcome of a multitude of subtle and complex social-environmental exchanges which constitute an individual's cumulative learning history (Skinner, 1969).

It follows that a multifaceted assessment process that is based on multiple and repeated measures has potential to yield more useful data than is available through focus on single response measures (see Bornstein, Bornstein, & Dawson, 1984). McConnell and his colleagues, for example, found that multiple rather than single events may be the determinants of classroom success (McConnell et al., 1984). Furthermore, they found that some covariation probably exists between the responses of academic achievement, academic engagement, compliance with teacher requests, and peer interactions.

As Cantrell and Cantrell (1985) stated, determining which variables to include, how to go about measuring them, and how to put the information obtained to work is seldom a simple undertaking. Studies have suggested that different responses are sometimes functionally interdependent, controlled by common environmental or setting variables. In contrast, single acts nested within a cluster of behaviors may be related more to one another than the same set of environmental events. Still other investigations have underscored the fact that behavioral clusters tend to vary across settings (Kazdin, 1985).

Evans, Evans, and Schmid (in press) and Hendrickson et al. (1987) have posed that knowledge of setting events can shed light on some of these issues and can be organized as (a) biophysical, (b) environmental, and (c) social variables. They argued that by attempting to account for some of the variables, a database might be established on those environmental-organism interactions subject to some external control. Shown in Figure 1, the Evans et al. (in press) conceptualization may offer some guidance to obtaining a fuller understanding of setting events. For example, biophysical factors consist of such acute conditions as hunger, anger, depression, and fatigue. Although not always amenable to usual quantification, these negative states can mitigate against even the most powerful behavioral intervention.

By comparison, social/environmental factors such as classroom rules, organization, and grouping for instruction are probably more easily measured. At the least, assessment of the possible influence of these and other setting events that together shape an individual's ecosystem might contribute to a fuller understanding of the environmental context of some behavioral disorders. Even so, more is not necessarily better — a danger is that quantity will be seen as being synonymous with quality. Indeed, we are already burdened by the difficulty to distinguish among variables that make a difference in behavioral-environmental interactions.

Knowledge gleaned from survey or interview represents another source of ecological data (Warren, 1977). These measures, even lacking the objectivity associated with direct observation, can lead to detection and loose specification of ecological factors that may relate to treatment (e.g., Holman, 1977). Selecting treatment targets that have functional utility — behaviors that will facilitate more effective adjustment in succeeding less restrictive environments — remains an elusive goal (Bailey & Lessen, 1984). Aside from its value in determining the practical benefits of intervention, this social validation process can serve to clarify the significance of selected assessment and treatment procedures.

Implications for Intervention

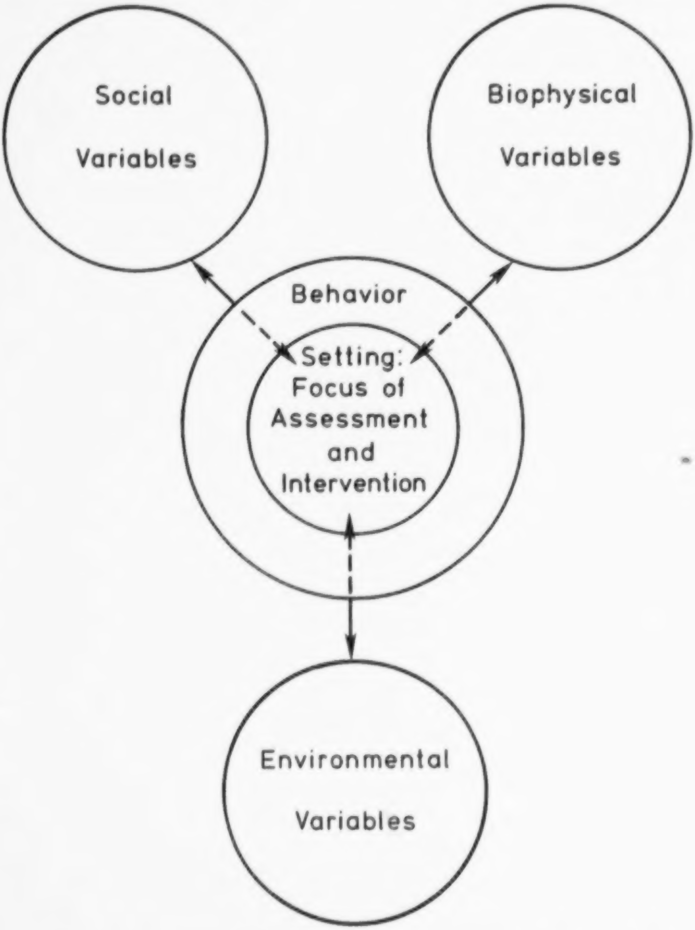
Accumulated research clearly demonstrates the difficulties we face in our attempts to positively influence complex behaviors in the natural environment. These difficulties are most often expressed by transitory effects or limited generalization and sometimes by our reliance on strong but questionable procedures (e.g., punishment techniques) to force changes in behavior that we have not yet been able to fully functionally analyze (Durand, 1987). However, the field clearly has made progress as reflected by our increasingly sophisticated analyses of generalization (Rutherford & Nelson, in press).

One example of progress in the field is the increasing practice of engaging individuals indigenous to the child's natural environment in the treatment effort (Gable & Strain, 1979). The situation-specific quality of many behavioral disorders and the methodological problems associated with generalization have prompted a shift from adult to peer mediated programing. Indeed, casting agemates in the role of change agents has been shown to influence multiple responses of children singled out to obtain treatment (see Strain, 1981).

In a recent study, Sandler and his colleagues obtained some collateral changes in a constellation of inappropriate classroom behaviors (Sandler, Arnold, Gable, & Strain, 1987). Specifically, use of peer-initiated verbal prompts directed toward diminishing certain target behaviors led to a decline in nontarget disruptive acts. As this and other studies illustrate, engaging peermates in the treatment process can be more effective than relying on adult intervention alone. With peer-initiated treatment, the prospects also increase for more enduring behavior changes and children indicate that peer-mediated treatment is preferred over that of adults.

Finally and most important, behavioral gains are more likely to generalize to situations in which adult-mediated contingencies have not been applied (Reitz, Gable, & Trout, 1984; Sandler et al., 1987; Strain, 1981). The use of self-control and cognitively-based procedures also hold promise for accomplishing this goal.

Given our present knowledge, when we move beyond the rather circum-


Social
Variables
Biophysical
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Behavior
Setting:
Focus of
Assessment
and
Intervention
Environmental
Variables

Figure 1. *Etiology of behavior as a function of social, biophysical, and environmental interactions*

scribed setting of the classroom or school, assessment options become less clear, treatment more difficult, and generalization less certain (Hendrickson et al., 1987). Correspondingly, as illustrated in Figure 2, shifting from molecular to molar — single acts of an individual to multiple targets within a group — taxes knowledge that can be gleaned from available research. Interested readers are referred to Nelson (1987) and Nelson and Rutherford (in press) for a more complete discussion on behavioral intervention.

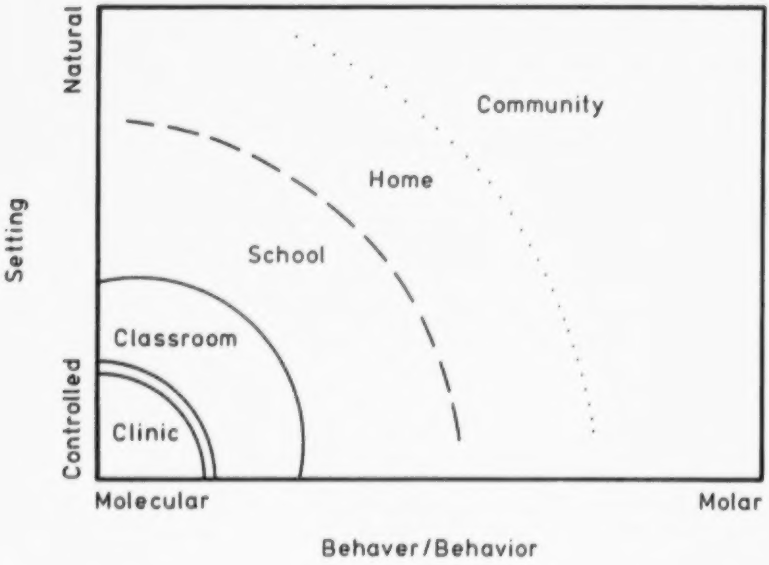

Figure 2. *Behaver/behavior and setting dimensions of assessment and treatment*

Taking a broader view, Graziano and Bythell (1983) posited that the sometime failure of behavioral intervention can be attributed to contextual or technical failure. Contextual failure reflects nontherapeutic control exerted by some element in the environment so that it is not possible to sustain changes in behavior. An example of this failure occurs when too narrow a treatment focus mitigates against its success — parents are not taught new approaches to deal with their child (Evans & Evans, 1987; Nelson & Rutherford, in press). In contrast, technical failure pertains to such issues as the lack of demonstrated long-term behavior change across settings as well as selection of inadequate procedures to accomplish desired changes. From an ecological perspective, the argument can be made that contextual failures underscore the need to conduct more sophisticated and clinically valid measurement of the ecosystem and that assessment and intervention need to be inextricably linked (Nelson & Rutherford, in press). Technical failure is independent of the social context, is a problem of generalization, and demands greater attention to selecting strategies that maximize responsiveness in the natural environment as well as sustain behavioral gains. In all, while much has yet to be accomplished, as behavior analysts increasingly assume an ecobehavioral perspective, the promise grows for resolving many of the methodological problems that remain in the interrelated areas of assessment and treatment of behavioral disorders.

CONCLUSION

A decade ago, Gump (1977) mused whether behavior analysts would actually pursue ecological issues. As the literature of applied behavior analysis has borne out, we have learned a great deal about the organization of behaviors and their environmental settings. The "shortsighted" focus of early behavior analysts (Willems, 1974) is being replaced by a vision that reflects a more complete picture of relevant individual and environmental determinants of children's behavioral disorders. Given our present knowledge, we cannot abandon efforts to refine assessment and treatment practices. Still, a major challenge remains, namely, the further refinement of an ecobehavioral approach. In the end, success appears to hinge on whether or not we can account for the complex nature of behavior and can achieve meaningful generalization in our treatment efforts (Rutherford & Nelson, in press).

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The Effects of Three Behavioral Interventions on the Disruptive Behavior of Behaviorally Disordered Students

Mitchell L. Yell

ABSTRACT

The present study investigated the use of three behavioral interventions to reduce the disruptive behavior of two behaviorally disordered boys in a special education classroom. The interventions were planned ignoring, planned ignoring plus peer reinforcement for ignoring target behavior, and response cost. A variation of the ABAB single case design was used to assess treatment effects. Treatments were counterbalanced to control for ordering interactions. Results of the study indicate that during the planned ignoring phase the rates of target behaviors increased relative to baseline rates, in the planned ignoring plus peer reinforcement phase emission of target behaviors decreased to a level slightly below that of the baseline, and during the response cost phase, the rates of emission of the target behavior decreased to well below baseline rates for both participants. Results of this study indicate that extinction/planned ignoring may not be appropriate for use in the complex environment of the classroom. However, results do support the use of response cost systems in special education classrooms. Response cost was effective in decelerating target behaviors and was viewed as practical, efficient, and easy to implement by trained program personnel.

Behaviorally disordered students may exhibit a multitude of deviant behaviors in the classroom. These behaviors tend to create discomfort in people around them (McDowell, Adamson, & Wood, 1982). In school they are often disturbing to teachers and peers and tend to disrupt the classroom environment. Therefore, it is necessary that effective pupil management be used with these students if the educational program is to be successful (Braaten, Simpson, Rosell, & Reilly, 1988). Nelson and Rutherford (1986) reviewed a large body of research which has documented the efficacy of behavioral interventions in the management of behaviorally disordered children.

The purpose of the present study was to compare the effects of three behavioral interventions on the disruptive behavior of two behaviorally disordered students in a self-contained special education classroom. Two of the interventions investigated were extinction procedures, planned ignoring and planned ignoring plus reinforcement of classroom peers for ignoring target behaviors (hereafter referred to as ignoring plus peer reinforcement). The third intervention investigated was a response cost system.

Extinction is a procedure in which a behavior that has been previously reinforced is no longer reinforced (Sulzer-Azaroff & Mayer, 1986). The consistent nonreinforcement of a target behavior will eventually result in the deceleration of that behavior. Extinction procedures have been used with a wide variety of populations and behaviors in a wide variety of settings. Advantages of extinction include longevity effects and avoidance of some of the negative effects of aversive stimuli (Sulzer-Azaroff & Mayer, 1986). Disadvantages are that results are gradual and that recognition and control of all sources of reinforcement which is necessary for extinction can be very difficult. Uncontrolled sources of reinforcement of the target behavior will sabotage the procedure.

An extinction procedure that has received attention in the behavioral literature is planned ignoring. In using planned ignoring in a classroom, the teacher systematically turns away from the student exhibiting the target behavior, thereby removing his/her social attention from the student (Rutherford & Nelson, 1982). The assumption is that the teacher attention is the reinforcer for the behavior and by removing it, the behavior will be extinguished. Rutherford and Nelson reviewed 13 investigations of planned ignoring. An examination of the studies reviewed indicates that results were generally positive. However, according to Rutherford and Nelson, none of the 13 investigations met all the experimental and procedural criteria of the review. The methodological and procedural flaws render interpretations of these studies problematical.

A powerful reinforcer for disruptive behavior in the classroom is peer attention. The implementation of a planned ignoring strategy when a reinforcer for the target behavior is peer attention is doomed to failure, unless as suggested by MacMillan, Forness, and Trumbull (1973) the teacher gains the cooperation of the peers in ignoring the target behavior. The method used to gain peer cooperation in this study was token reinforcement. All students in the classroom were reinforced for cooperating in ignoring target behavior. This procedure, if effective, would be a logical argument for a planned ignoring strategy.

Response cost is a procedure whereby previously earned reinforcers are removed following the emission of a target behavior (Walker, 1983). The student's emission of a previously specified response results in a cost to her/him. In essence, the student pays for the misbehavior. Response cost is a mild aversive which avoids many of the negative features of punishment (Kazdin, 1977). It is easily implemented and has been proven a powerful behavioral change procedure. It has been used to reduce aggressive verbalizations (Phillips, Phillips, Fixsen, & Wolf, 1971), out-of-seat behavior (Wolf, Hanley, King, Lachowicz, & Giles, 1970), hyperactivity (Rapport, Murphy, & Bailey, 1982), and a variety of inappropriate classroom behaviors (Walker, 1983).

Walker (1983) described two ways that response cost can be used. The first involves allowing students to earn points contingently for appropriate behaviors and then removing them for inappropriate behaviors. In the second method the teacher awards points noncontingently. By not emitting the specified behaviors, the student retains points; for emitting the specified behaviors, the student loses points. Walker also provided seven rules which should be followed in implementing a response cost procedure:

1. Response cost should be implemented immediately after the occurrence of the target behavior.
2. Response cost should be applied each time an instance of a target behavior occurs.

3. The child should never be allowed to accumulate negative points.
4. The ratio of points earned to those lost should be controlled.
5. The implementation agent should never be intimidated or manipulated out of using response cost by the target child.
6. The subtraction of points should never be punitive or personalized.
7. The child's positive, appropriate behavior should be praised as frequently as opportunities permit. (p. 52)

A program of positive reinforcement which uses points, privileges, or tokens which can be taken away is a necessary prerequisite for a response cost system (Morgan & Jenson, 1988). Kerr and Nelson (1983) note that a response cost system will fit easily into any positive reinforcement system. Advantages of a response cost system include strong and rapid rates of behavioral reduction and the ease and convenience of the procedure (Sulzer & Mayer, 1972).

METHOD

Participants and Setting

The investigation was conducted with two male students in a self-contained special education classroom for behaviorally disordered students located in a metropolitan junior high school. Student one was a 13-year-old in eighth grade, student two was a 14-year-old in ninth grade. Both students had school histories of disruptive behaviors and academic difficulties. Records indicated that previous teachers had consistently referred to both students as chronic behavior problem students although neither had been described as particularly aggressive. They had been accepted into the program in accordance with state guidelines for the identification of behaviorally disordered students. A child study team had determined that both students exhibited severely deviant disruptive behavior which had adversely affected educational progress of themselves and other students, and that this behavior was both chronic and pervasive. The behavior had not been improved by two documented interventions in the previous placement.

The classroom was staffed by a management paraprofessional and a certified teacher of the behaviorally disordered. A behavior analyst was available for consultation. There were six students in the classroom. The students were educated in the self-contained setting for the entire school day.

The behavior management system used in the classroom consisted of a point system to reward appropriate behavior. Students were given 10 points noncontingently at the beginning of the school day. Five rules were displayed; for following these rules students could earn 5 additional points at the end of each half-hour period. Following each period the teacher and student would discuss the student's behavior; following the discussion the teacher would award the points. The points were given in the form of colored strips of paper which were stored in jars on the students' desks. During group activities the students would take the jars to the group table. At the end of the school day the students would total their points and write the total on a point chart. The amount of points earned determined the privileges that the student would receive the following day.

The teacher and paraprofessional responded to misbehavior with systematic verbal aversives such as saying the student's name followed by "I need you to pay attention" or "I need you to stop talking." The teacher reported that the system worked well with four of the students in the classroom. The teacher noted that the system had improved the behavior of the students participating in the study, but to a lesser extent. Both teacher and paraprofessional considered the primary misbehaviors exhibited by these two students to be talking out during academic sessions. Preliminary observations by the author confirmed these impressions. Therefore, talk-outs were selected as the target behavior.

For purposes of the study, a talk-out was operationally defined as talking without teacher permission in a voice loud enough to be heard by the paraprofessional seated near the students. A partial interval sampling method was used to count the target behaviors (Kazdin, 1982). The interval length was 30 seconds. The interval length was measured using a clipboard with a timing and beeping device attached to it. The timer was set to beep every 30 seconds. Jacks on the beeping device allowed two earplugs to be used. The use of an earplug rendered the beep inaudible to all except the user. Following a beep the paraprofessional observed the student, marking in the appropriate interval on an observation sheet attached to the clipboard if the target behavior was emitted. When the beep sounded again, the paraprofessional moved to the next interval. If at any time during the 30-second interval the target behavior occurred, the entire interval was marked. Observations were recorded during two half-hour sessions daily — the first in a social studies class and the second during reading class. Each class contained three of the students in the room; groups were formed in accordance with approximate reading levels. The students participating in the study were in separate groups. The paraprofessional was trained by the author in the use of the observation system and beep board. Four practice sessions were held prior to the study. High rates of interobserver agreement (over 90%) were recorded in all practice sessions.

Interobserver Agreement

Interobserver agreement was assessed on seven occasions during the study. Reliability was calculated using the point by point agreement ratio (Kazdin, 1982). In this procedure the records of each of the observers are compared to determine whether the observers recorded a particular response as occurring. Agreement is assessed on a point by point basis. Average reliability was 98%.

Design

A variation of the ABAB design was used to assess the effectiveness of the three interventions. Presentation of the interventions were counterbalanced to control for treatment interaction effects. The design used with student one was an ABACAD reversal design; an ACADAB reversal design was used with student two. The design for student one (ABACAD) was chosen over other designs as it provided a method for investigating intrusive interventions in a graduated manner, that is, less intrusive to more intrusive. Braaten et al. (1988) contend that more intrusive interventions should be used only after less intrusive interventions have failed, a principle they refer to as hierarchial application. The ABACAD design used in this study is an example of this principle. An ACADAB design was used with student two to partially control for treatment interaction effects.

Procedure

Baseline — A phase. During the baseline phase the teacher instructed the students in small groups. The classroom reinforcement system operated in the manner previously described and was continued through all phases of the study. Baseline rates of behavior were recorded prior to the initiation of the first intervention; this phase lasted for 5 days. A return to baseline followed each intervention; these phases lasted for 3 days. Stable rates of behaviors were observed during baselines for both students.

Planned ignoring — B phase. During this phase the teacher ignored target behaviors emitted by the students. This was accomplished by the teacher turning away from the student, thereby withholding her attention. This phase was continued for 10 days to give the procedure a longer period to take effect. This was necessary as an extinction procedure results in a gradual decrease in behaviors and may be accompanied by an extinction burst (the rates of the target behavior increase following initiation of the extinction procedure).

Planned ignoring plus peer reinforcement — C phase. During this phase the teacher continued to ignore the emission of target behaviors as in the previous phase. The teacher also informed all the students that they could earn extra points if they ignored talk-out behaviors exhibited by other students. Students were given points (i.e., colored strips of paper) if they said nothing and turned away from the student emitting the target behavior. This phase lasted for 5 days.

Response cost — D phase. Prior to initiation of the study both paraprofessional and teacher were trained in the use of a response cost system. The same classroom reinforcement system used in the other phases was continued in this phase. The response cost system was explained to the students before it was applied to target behaviors. Students were told that the points they received for good behavior would be taken away if they chose to break the rule stating that they could only talk when given permission by the teacher. During this phase the teacher immediately removed a strip of paper from any student's jar when she observed him/her talking without permission.

RESULTS

The hourly rate of the two students' talk-out behavior across the 31 sessions of the study are shown in Figures 1 and 2. The mean rate of talk-out behavior within each phase is also shown.

Student 1. During baseline 1, the average hourly rate of talk-outs was high. The rates were also relatively stable; the mean rate was 36.4 per hour. When planned ignoring was introduced there was an immediate increase in talk-outs. An increase of this sort might be expected immediately after introducing an extinction procedure due to the phenomena of extinction burst. However, rate of talk-outs remained stable at a mean rate of 43.9 per hour for all 10 days of the intervention. When return to baseline was initiated, talk-outs decreased to a mean rate of 37 an hour. Thus, the planned ignoring phase appeared to actually increase the target behavior. The rate of emission of the target behavior decreased to a mean of 24.4 per hour during the ignoring plus peer reinforcement phase. An increase of target behaviors during the second return to baseline demonstrates a slight positive effect for this intervention. The response cost procedure produced an immediate decrease in target behavior, the mean for the phase being 11.4 talk-outs per hour.

Student 2. The presentation of the interventions was altered to control for

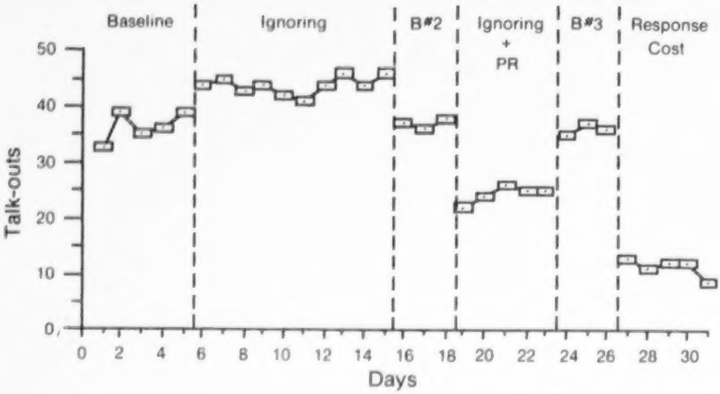

Figure 1. *Student 1*

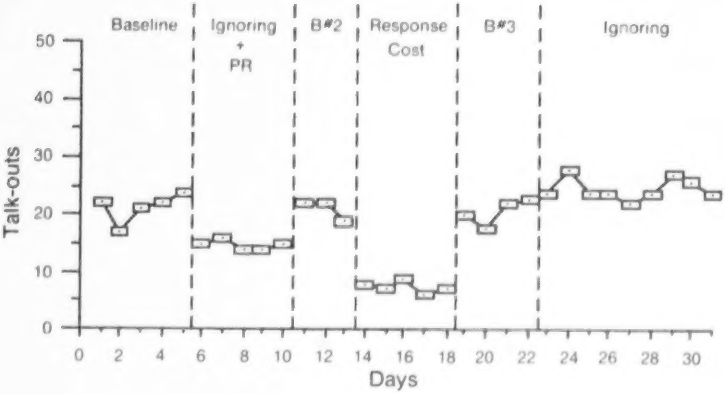

Figure 2. *Student 2*

treatment interaction effects. Although hourly rates of the target behavior were considerably lower than those of Student 1 and the results do not appear as dramatic, the pattern remained consistent. The planned ignoring plus peer reinforcement phase shows slight but clear decreases in the emission of the target behavior. Mean rates went from 21.2 during baseline to 14.8 during this phase. During return to baseline target behavior increased to a rate of 21 per hour, demonstrating the efficacy of this procedure. Target behaviors decreased to an hourly rate of 7.4 during the response cost phase. During the second return to baseline target behaviors increased to levels nearly equal to that of the initial baseline and first return to baseline (X = 20). The planned ignoring procedure was the final phase implemented, again lasting 10 days. Rate of emission of target behavior increased to a level higher than baseline (x = 24.6) during this phase.

DISCUSSION

This investigation found that the planned ignoring plus peer reinforcement intervention and the response cost intervention were effective in decreasing rates of talk-outs for both students. There was an increase in talk-outs in the planned ignoring intervention relative to the baseline phase.

Jones and Miller (cited in MacMillan et al., 1973) found that teachers who used quick and mild aversives to deal with disruptive behavior in groups with behaviorally disordered students had more orderly and productive group sessions than teachers who used planned ignoring procedures to deal with disruptive behavior. The results of this investigation seem to support these conclusions. Although data were not recorded specifically concerning the use of verbal aversives, these techniques were used by the teacher during the baseline phases and did appear to be more effective than planned ignoring. The teacher and paraprofessional noted that the planned ignoring intervention seemed to increase talk-outs for other students in the groups. Students, apparently realizing that talk-out behavior was not consequated by the teacher, began to increase their rates of talking-out.

Polsgrove and Reith (1983) state that in using an ignoring procedure with misbehaving children, it is essential that the classroom ecology be carefully analyzed to determine what behaviors are maintained by which variables. They further contend that extinction should only be used when the behavior is not harmful, intrinsically reinforcing, when all reinforcers for target behaviors can be identified, and when there is little likelihood that peers will model the problem behavior. It may be that, as MacMillan et al. (1973) contend, such procedures alone are not sufficient in the complex environment of the classroom.

In an attempt to control additional reinforcers for the talk-out behavior, the behavioral intervention used in the C phase involved teacher and student ignoring of the emission of target behaviors. Students were reinforced for ignoring talk-out behavior. During this phase, the target behaviors decreased relative to the baseline rates. However, the decrease was slight especially in comparison with decreases in target behaviors evidenced in the response cost phase. Program personnel also noted that the implementation of this intervention was time consuming and somewhat cumbersome. An additional problem, according to MacMillan et al. (1973), is that a procedure of this sort may lead to scapegoating on the part of students involved. The overall impression of this intervention was that it was not particularly effective.

The response cost intervention was effective in decreasing the high rates of target behavior for both students. The teacher and paraprofessional indicated satisfaction with the procedure, noting that it was effective, not disruptive of classroom flow, and easy to implement.

A limitation of the present study was that the interventions were applied to only one target behavior. The two interventions that were successful with this behavior may not necessarily be effective for more deviant behaviors. A further limitation is that the order of the interventions were only partially counterbalanced; the response cost phase always followed the ignoring plus peer reinforcement phase.

Results of this investigation support the use of a response cost system as a simple procedure, which is easy to implement and is not disruptive to the educational process, and may have a substantial effect on the disruptive behaviors of behaviorally disordered students.

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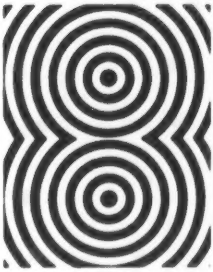

Teacher Training

Stress and the Special Educator

Charles V. L. Dedrick and Donna B. Raschke

ABSTRACT

Special educators are very much affected by pressures which evolve from working with children and youth who present a wide variety of social and academic challenges. In order to gain a more substantive picture of stress variables which impact special educators, the authors designed a survey instrument which requested special educators to respond to a series of questions which would permit an analysis and comparison of stressors on the basis of student population, service delivery model, and level of instruction. Specifically, the following types of information were solicited: (a) how special educators rank order 12 predominant sources of job stress, (b) ways special educators deal with stress, and (c) aspects of the job that special educators like and dislike. Stress surveys were mailed to 480 special educators in a midwestern state; 240 teachers returned complete and usable data.

The data revealed special educators are most distressed by student unmet needs and uncooperative students. A specific concern regarding the lack of collegeal support was identified. The use of humor, emphasis on positive professional achievements, and participation in hobbies was identified as predominant strategies for dealing with stress while student progress, curricular challenge, and the freedom to implement were identified as the most enjoyable and fulfilling aspects of the job. Given the findings of this study, a concerted effort should be made to ensure that regular educators, special educators, and support staff work in harmony to develop a more comprehensive interdisciplinary orientation to educational programing.

Accumulated evidence supports the fact that teacher burnout is a serious problem in the United States (Feistritzer Associates, 1983). Each year thousands of classroom educators exit the teaching profession. Some leave primarily for economic reasons, but many leave because they have found teaching to be unrewarding in light of public criticism, conflicting societal expectations, lack of support from parents and administrators, and students who no longer possess the attributes necessary for sustained academic learning (Rashke, Dedrick, Strathe, & Hawkes, 1985).

It is widely recognized that special educators are very much affected by the pressures which accompany working with children and youth who present a wide variety of social and academic challenges (DeShong, 1981; Weiskopf, 1980; Zabel & Zabel, 1980). Research conducted by Bensky (1979) revealed that assessment and diagnostic responsibilities were the two variables most frequently identified by special educators as contributors to job-related stress. In a related investigation, Olson and Matuskey (1982) reported that excessive paperwork, pupil-teacher relations, inadequate planning time, low salary, discipline of students, and student attitudes were primary sources of stress for special educators performing in a variety of service delivery system roles. Research conducted by Greer and Wethered (1984) found that the heavy demands placed on special educators such as due process hearings, place-

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ment team meetings, diagnostic testing requirements, and consulting demands significantly contribute to special educator stress. These authors stressed that teachers often work in isolation from other adults; class schedules and student demands restrict interactions with peers. In this context, the rewards of the profession come from students, not from sharing experiences or problems with colleagues (Lieberman & Miller, 1978).

D'Alonzo and Wiseman (1978), in a study designed to compare actual and desired roles of high school resource teachers, found that confusion regarding the role and responsibilities of resource teachers produced resentment and interpersonal problems among regular educators, special educators, and staff administration. Taylor and Salend (1983) found that 50 percent of the questionnaire respondents (special educators) indicated that a lack of support from other school personnel was a significant variable contributing to job stress. The identification of specific stressors relative to the teaching of behaviorally disordered students has been identified (Lawrenson & McKinnon, 1982; Zabel & Zabel, 1982). Teachers of behaviorally disordered students are often isolated from colleagues. This condition severely delimits opportunities for social and professional support (Zabel, Boomer, & King, 1984). As these and other studies amply demonstrate, there is no doubt that on the national level a variety of stress variables significantly impede the performance of many special educators. Even so, a range of questions regarding stress and the special educator remain to be answered.

STATEMENT OF THE PROBLEM

This study sought to examine three questions with regard to stress and the special educator:

1. What are the major job stressors identified by special educators?
2. What are the ways special educators deal with job-related stress?
3. What do special educators cite as desirable and undesirable aspects of their work environment?

Additionally, the investigation was designed to ascertain if there were differing perceptions regarding stress as reported by special educators serving different student populations. A concerted effort was made to compare and contrast the manner in which behaviorally disordered (BD), learning disabled (LD), mentally disabled (MD), and multicategorical (MC) teachers responded to the three questions listed above, with a particular emphasis on comparing BD teacher responses with the other three groups. Observations regarding differences found across categories are offered.

METHOD

Subjects

Using a table of random numbers, 480 K-12 special education teachers from school districts of various sizes throughout a central midwestern state were selected and mailed a 3-page questionnaire. The demographic characteristics of the respondents are summarized in Table 1. Each participant was asked to respond confidentially to questions addressing (a) the rank ordering of stressors in the profession, (b) ways of dealing with job-related stress, (c) sources of job satisfaction, and (d) suggested changes in the workplace. Where appropriate, respondents were encouraged to provide elaborative comments. A total of 240 teachers (50%) returned complete and usable data. No one group of teachers appeared to have a significantly higher questionnaire return than any other group.

TABLE 1

Demographic Characteristics

Characteristics	Respondents	Nonrespondents
Teaching Level		
Elementary	91 (38%)	87 (36%)
Junior high	96 (40%)	77 (32%)
Senior high	53 (22%)	76 (32%)
Service Delivery System		
Resource room	72 (30%)	108 (44%)
Integrated	122 (51%)	78 (33%)
Self-contained	46 (19%)	54 (23%)
Student Population		
Learning disabled	79 (33%)	41 (17%)
Behaviorally disordered	70 (29%)	50 (21%)
Mentally disabled	41 (17%)	79 (33%)
Multi-categorical	50 (21%)	70 (29%)
Years of Experience		
0-2	34 (14%)	NA
3-8	86 (36%)	NA
9-16	86 (36%)	NA
17-25	24 (10%)	NA
25+	10 (4%)	NA
Sex		
Female	209 (87%)	210 (88%)
Male	31 (13%)	30 (12%)
Educational Level		
Bachelors	115 (48%)	NA
Masters	120 (50%)	NA
Specialist/Doctorate	5 (2%)	NA
Geographical Local		
Rural	119 (50%)	NA
Metropolitan	121 (50%)	NA

Note: Percentages are rounded off to the nearest whole number and reported in absolute frequency scores.

Instrument

Designed by Dedrick and Raschke, the survey instrument consisted of four major sections. In Section I, special education teachers were asked to rank 12 items according to the relative (prioritized) contribution each item played in the respondent's perception of job-related stress. The 12 items had each been previously identified as stressful to special educators in previous research (Olson & Matuskey, 1982; Taylor & Salend, 1983). Section II required teachers to focus on 16 strategies for dealing with job-related stress which had been previously identified in the literature (DeShong, 1981; Dixon, Shaw, & Bensky, 1980; Holland, 1982; Miller, 1979; Weiskopf, 1980). Using a Q-sort management

TABLE 2

Rank Order of Identified Stresses:
Comparison of BD Teachers with LD, MD, MC Teachers

Rank	BD Teachers Stress	LD Teachers Stress	MD Teachers Stress	MC Teachers Stress
1	Student unmet needs	Student unmet needs	Paperwork	Student unmet needs
2	Uncooperative students	Paperwork	Student unmet needs	Lack of preparation time
3	Unhelpful administrators	Lack of preparation time	Lack of preparation time	Paperwork
4	Nonsupportive parents	Uncooperative students	Nonsupportive parents	Uncooperative students
5	Paperwork	Nonsupportive parents	Uncooperative students	Nonsupportive parents
6	Lack of support from specialized services	Regular class teachers' attitudes	Lengthy meetings	Large teacher/pupil ratio
7	Lack of preparation time	Large teacher/pupil ratio	Lack of support from specialized services	Regular class teachers' attitudes
8	Regular class teachers' attitudes	Unhelpful administrators	Large teacher/pupil ratio	Unhelpful administrators
9	Insufficient resources	Lack of support from specialized services	Unhelpful administrators	Lack of support from specialized services
10	Lengthy meetings	Lengthy meetings	Insufficient resources	Insufficient resources
11	Large teacher/pupil ratio	Insufficient resources	Regular class teachers' attitudes	Lengthy meetings
12	Isolation from colleagues	Isolation from colleagues	Isolation from colleagues	Isolation from colleagues

(Minner & Beane, 1985), participants were requested to rank the 16 strategies for dealing with stess from items perceived as "most like me" to items which were perceived as "least like me". Sections III and IV of the questionnaire consisted of open-ended questions asking teachers to make elaborative comments regarding desirable and undesirable aspects of their work environment.

RESULTS

Rank Ordering of Job-Related Stresses

Table 2 presents a comparison of the rankings of predetermined job stress items as determined by BD, LD, MD, and MC special education teachers. An overview of the data displayed by all four groups indicates that students with unmet needs are a major source of stress for all special educators as is lack of preparation time. The respondents were least concerned about isolation from colleagues, uncooperative students, nonsupportive parents, lengthy meetings, and insufficient resources. Middle level stressors include concerns about regular teachers attitudes and unhelpful administrators.

When comparisons are made among teachers of BD students and the three other student-population groups, some striking differences appear. BD teachers express the most serious concern over students' unmet needs and students who display uncooperative and disruptive behaviors. Of the four groups compared, BD teachers are most concerned about administrators who are neither knowledgeable nor helpful with regard to needs/problems faced by special educators, but much less concerned with items such as paperwork and lack of sufficient preparation time than the other three groups. Interestingly, BD teachers were less concerned about student-teacher ratios than LD, MD, or MC educators, but expressed greater concern about the lack of support from specialized services.

Ways of Dealing with Job-Related Stress

In terms of the overall research sample (Table 3), the use of humor was identified by respondents as the most prominent strategy for dealing with job-related stress, while focus on one's accomplishments — emphasis on positives — was also identified as a preferred strategy. A third coping strategy targeted by special educators in general was active participation in a variety of hobbies, specifically activities which are unrelated to the everyday responsibilities of the teaching profession.

The strategies which were least frequently utilized by special teachers to alleviate job-related stress were late arrival to work, thoughts about leaving the profession, confrontation with other staff members, and joining a support group. Other coping mechanisms seldom identified by respondents to combat stress included complaining to administrators and supervisors, yelling at students, and overeating/overdrinking.

Additional activities such as lesson planning, exercise, and reading were seen as "like me" ways of handling job-related stress while confrontations, support groups, complaints to administrators, and use of punitive measures were items frequently placed in the "unlike me" cluster.

Comparisons among the four groups yield few major differences. All four groups utilized positive means of coping with job-related stress such as humor, participating in hobbies, and focusing on accomplishments. Additionally, BD

TABLE 3

Order of Placement of Ways of Dealing with Job-Related Stress Comparison of BD Teachers with LD, MD, MC Teachers

Special Education Population	Most Like Me	Very Much Like Me	Like Me	Undecided	Unlike Me	Very Much UnLike Me	Most UnLike Me
BD Teachers	Laugh/humor	Hobbies Focus on accomplishments	Read Plan Solicit positive comments	Overeat Ventilate frustration Exercise Leave profession	Complain to administration Support group Use punitive measures	Yell at kids Arrive late	Confront other staff members
LD Teachers	Focus on accomplishments	Hobbies Laugh/humor	Exercise Read Yell at kids	Support group Plan Solicit positive comments Use punitive controls	Complain to administration Ventilate frustration Leave profession	Confront other staff members Overeat	Arrive late
MD Teachers	Laugh/humor	Read Focus on accomplishments	Plan Hobbies Exercise	Yell at kids Overeat Ventilate frustration Solicit positive comments	Confront other staff members Support group Use punitive measures	Arrive late Complain to administration	Leave profession
MC Teachers	Laugh/humor	Hobbies Focus on accomplishments	Plan Read Exercise	Yell at kids Use punitive controls Ventilate frustration	Complain to administration Confront other staff members Overeat	Arrive late Leave profession	Support group

TABLE 4

Desirable and Undesirable Aspects of the Work Environment: Comparison of BD Teachers with LD, MD, MC Teachers

Teachers	List three aspects of your job that you like	If you could change aspects of the environment in which you work, what would these changes be?
BD	1. Student progress (56%) 2. Students (44%) 3. Curricular challenge (37%) 4. Freedom to implement (25%) 5. Colleagues (18%)	1. More administrative support (46%) 2. More parent involvement (30%) 3. Less paperwork (24%) 4. Increase in planning time (16%) 5. More cooperation from regular teachers (12%)
LD	1. Student progress (51%) 2. Freedom to implement (42%) 3. Students (38%) 4. Colleagues (25%) 5. Teacher-student ratio (19%)	1. Better room accommodations (44%) 2. More cooperation from regular teachers (33%) 3. Increase in planning time (22%) 4. More administrative support (16%) 5. Increased integration (11%)
MD	1. Student progress (41%) 2. Students (37%) 3. Freedom to implement (31%) 4. Colleagues (28%) 5. Curricular challenges (16%)	1. Less paperwork (43%) 2. Increase in planning time (34%) 3. More cooperation from support personnel (23%) 4. More parent involvement (17%) 5. More administrative support (11%)
MC	1. Student progress (53%) 2. Students (47%) 3. Freedom to implement (36%) 4. Colleagues (32%) 5. Teacher-pupil ratio (17%)	1. Better room accommodations (41%) 2. Increase in planning time (34%) 3. More cooperation from regular teachers (28%) 4. Less paperwork (18%) 5. Increased integration (12%)

teachers — as the other teachers — did not utilize confrontative strategies, late arrival, or support groups as a means of handling stress. However, unlike the other three groups, BD teachers rated soliciting positive comments as a "like me" and rated yelling at kids as a "very much unlike me" category.

Desirable and Undesirable Aspects of the Profession

The research sample (Table 4) unanimously identified student progress (academically and socially) as the most enjoyable and fulfilling aspect of their job. Working with students on a daily basis and working in a collegial atmosphere were desirable features of the teaching profession identified by respondents. Other job satisfiers identified by special educators included the freedom to implement programs, small teacher-student ratios, and the challenge inherent in matching student needs with appropriate instructional resources. BD teachers listed student progress and curricular challenges with greater frequency than the other three groups.

With regard to suggested changes in the workplace, respondents emphasized the need for better room accommodations, more administrative support, and the development of a better working relationship with regular educators. In addition, the need for more planning time, less paperwork, increased integration of special students in regular school activities, and more parent involvement were all identified as targeted components of the work environment in need of improvement. Of all the groups, BD teachers felt strongest about the need for more administrative support as well as greater parent involvement.

DISCUSSION

The attrition rate among classroom teachers is cause for concern. In addition, a disturbing number of young teachers are leaving education to pursue careers which provide higher salaries and less obstacles to job satisfaction (Raschke et al., 1985; Zabel & Zabel, 1983). A variety of information identifying major stressors, ways of dealing with stress, and desirable and undesirable aspects of the job was obtained.

In assessing the information gleaned from the three major formats utilized by the survey instrument (rank order, Q-sort, and the open-ended questions), several themes reoccur which seem to be representative of substantive issues expressed by special educators in this sample.

In the present study, a primary concern consistently identified by special educators is the lack of professional dialogue and support from other members of the professional community with whom they work in close proximity: regular teachers, specialized support personnel, and administrators (see Table 4). D'Alonzo and Wiseman (1978) pointed out that this lack of cooperative involvement can seriously jeopardize the spirit of mainstreaming and can have negative effects on children with special learning problems. Indeed, the teachers responding to this survey have noted the need for a cooperative and collaborative approach if quality comprehensive educational programs are to be provided to exceptional students. Dixon et al. (1980) found that providing staff members the opportunity to become personally involved in mutual planning activities was more effective in enhancing staff morale than involving staff members in the IEP decision-making process. Ways of enhancing team cohesiveness and techniques for bridging communication across disciplines need to be identified so that a more effective interdisciplinary orientation toward exceptionalities may be taken.

A second theme emerging from the data is that generally speaking, special educators employ a variety of positive techniques for dealing with job stress such as humor, focusing on professional success experiences, and enjoying hobbies. Special educators, however, appear to be reluctant to confront other staff members and building/district administrators with regard to aspects of their work they find distressing or problematic. Unlike the results of some other studies (Raschke et al., 1985), it is refreshing to note that a majority of special educators indicated that leaving the profession was a "not like me" choice in the Q-sort format.

A third theme, which is very noteworthy given the current climate of teacher frustration and disillusionment (Fimian & Santora, 1983; Raschke et al., 1985; Taylor & Salend, 1983), is the finding that special educators enjoy working with students, are seriously committed to student progress, and enjoy the challenge of altering environments and materials to meet learner needs. The special education work environment provides teachers the opportunity to modify and implement curricular materials to best meet the needs of the exceptional learner.

Generally speaking, it appears that special educators who responded to this survey are satisfied with their jobs, in particular, working with students who exhibit special learning and behavioral challenges. Even so, what appears to be a critical job concern is working relations with other teachers, special support personnel, and administrators. This is especially disturbing since a network of collegial relationships across disciplines is essential if a comprehensive interdisciplinary orientation to educational programing is to be provided to exceptional learners. D'Alonzo and Wiseman (1978) and others have documented the need for a cooperative interdisciplinary approach.

In comparing BD teachers with the other three groups, there appears to be a cluster of job concerns which might have a high degree of interconnectedness. It is most understandable that teachers of behaviorally disordered students would rank uncooperative and disruptive students as a major source of job stress. Indeed, these teachers are working with a volatile, unpredictable group of youngsters who present very special challenges in the area of management. Perhaps, the fact that BD teachers work with students who are often perceived by other school staff as "troublemakers" might lead BD teachers more than the other categorical area teachers to feel administrators and supervisors are not sufficiently helpful in providing backup support.

Teachers of the behaviorally disordered, as well as MD teachers, identify parents as responsible for a moderate level of job stress. One might speculate that in the case of BD teachers, parental support is very much needed to present a consistency in the child's environment, and when parents do not follow through on suggestions made by BD teachers, this can seriously compromise any effectiveness teachers might have in the classroom. It would seem logical that working effectively with BD youngsters necessitates a high degree of regularity across a number of environmental settings (Shea & Bauer, 1987).

Overall, the present study shows that special educators employ a variety of positive techniques for dealing with job stress such as humor, focusing on professional success experiences, and enjoying hobbies. Special educators in general, however, appear to be reluctant to confront other staff members and building/district administrators with regard to aspects of their work they find distressing or problematic. Most interestingly, of the four groups, BD teachers were least likely to see themselves as engaging in confrontations with other staff members. A partial explanation might be that teachers of behaviorally disordered children are themselves well-versed in conflict resolution strategies and sensitive to interpersonal dynamics of explosive situations and subsequently utilize these skills when working with other staff members.

A final theme, noteworthy given the current climate of frustration and disillusionment among many educational personnel (Fimian & Santora, 1983; Raschke et al., 1985; Taylor & Salend, 1983), is the finding that special educators enjoy working with students, are seriously committed to student progress, and enjoy the challenge of altering environments and materials to meet learner needs. This is a fine testimonial illustrative of the commitment exhibited by many fine special educators in our school systems.

IMPLICATIONS AND RECOMMENDATIONS

This investigation, although constrained by the limitations of questionnaire research (see Campbell & Stanley, 1963), focused on the identification of factors that contribute to job-related stress among special educators as well as the delineation of strategies and activities employed to relieve stresses in the workplace. Information collected was contrasted on the basis of student population being served.

It is important to realize that stress among special educators is not a temporary phenomenon that can easily be eradicated through a short-term cosmetic approach. Whereas the participants in this study did not articulate an interest in leaving the teaching profession, a variety of stressors, many unique to a specific categorical area, were identified. Specifically, BD teachers, while not as concerned about paperwork as the other teachers, articulated frustrations regarding the uncooperative students with which they work on a daily basis. Indeed, the potential explosiveness and unpredictability so characteristic of this population can frustrate even the well-seasoned versatile practitioner. Additional research focusing on the identification of strategies to more effectively meet student needs and techniques to ensure better cooperation across supportive personnel is warranted. The need to secure better administrative support is also clearly articulated by all categorical area special educators.

And finally, information from this study provides some implications for preservice training programs. One recommendation is to encourage colleges/schools of education to structure training programs to emphasize more interactions between students preparing for careers in both regular and special education with regard to diagnosing student needs and working jointly on curriculum projects. Undergraduate and graduate students enrolled in preservice special education programs might benefit greatly from a rotating apprenticeship in which they "shadow" a school psychologist, speech clinician, educational strategist, or others, as well as observe staffings in which a number of professionals share information and reach consensus decisions regarding clients. Additionally, valuable experience could be gained by establishing a series of short-term participant immersons in which prospective teachers visit a number of settings such as mental health centers, training schools for delinquents, specialized schools, and segregated settings. And most important, the study identified the best antidote for teacher stress which cannot be overstated: FOCUS ON THE POSITIVE!

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After 12 Years of Training Teachers, I Think I've Found a Way to Teach Teachers of the Emotionally Handicapped to Deal with Verbal Aggression

Judy Olson

ABSTRACT

Instructional procedures used to teach undergraduate students enrolled in teacher training programs for the emotionally handicapped population to deal with verbal aggression are presented. The instructional model has been adapted for the university class from strategies identified by research as effective for the instruction of elementary and secondary regular and exceptional populations. The model also contains components identified from effective college teaching practices. Adaptation of the model is explained as well as results of its use.

A review of burnout literature finds that disruptive student behavior ranks high on the list of factors which contribute to teacher stress (Bruner & Felder, 1983; Creekmore, 1981; Kurtz, 1880; Olson & Matuskey, 1982; Raschke, Dedrick, Strathe, & Hawkes, 1985). Teachers of behaviorally disordered or emotionally handicapped students are even more subject to student created stress as the verbal aggressive behavior of many of these students challenges the authority of teachers. Without training, teachers often react to verbal aggression by allowing emotionally handicapped students to engage them in arguments. The purpose of this article is to present an instructional model for teaching junior and senior level college students enrolled in teacher training programs to deal effectively with the verbally aggressive behavior of their emotionally handicapped pupils.

Instead of just presenting the content using a traditional lecture method as is done in most college-level courses (Hoover, 1980; Kraft, 1985; Phoenix, 1987), this instructional model consists of concept presentation, controlled practice, individual practice, and generalization procedures. The concepts are presented using demonstration and modeling procedures while guided practice occurs through role-playing simulations, individual practice through class assignments, and generalization during the senior student teaching experience. The model requires active student participation. Thus, students not only hear and discuss the information, but they practice the techniques first in the university class and then in everyday situations.

Demonstration, controlled practice, and individual practice have been identified as effective teaching strategies for both exceptional and regular elementary and secondary students (Mayer, 1983; Mercer & Mercer, 1985; Peterson & Walberg, 1979; Rosenshine & Stevens, 1986; Sullivan, 1971). The procedures form the basis for the teaching model used with the very successful learning strategies curriculum designed at the University of Kansas Institute for Research in Learning Disabilities (Deshler, Alley, Warner, & Schumaker, 1981).

Hoover (1980), in a review of college teaching, recommends role-playing simulations as an effective teaching technique that "provides a safe setting and thus allows students to avoid costly errors of judgment while they are gaining valuable practice and insights" (p. 227). Rosenshine and Stevens (1986), in their review of research dealing with effective teaching strategies, list guided student practice and independent student practice among the six "fundamental instructional functions" (p. 379) of good teaching at any level. They find that practice leads to making skills readily accessible or automatic and allows for better problem solving. Recent reports in the area of higher education emphasize the need for student involvement as a key to learning (Chickering & Gamson, 1987; U.S. Government Document 20402, 1984). Thus, it appears that this instructional model originally designed for elementary and secondary students should be an effective teaching strategy for college level students.

INSTRUCTIONAL MODEL

Concept Presentation

How to handle verbal aggression is just one of the competencies taught in a four semester hour undergraduate class, Introduction to the Emotionally Handicapped. Most of the students in the class are preparing to become teachers of the emotionally handicapped and are enrolled in the first semester of their senior year. Some have had a junior student teaching experience consisting of about 192 student contact hours or are currently participating in such an experience.

The concepts are presented in a traditional lecture/discussion method along with video tapes and demonstration/modeling techniques. The concepts presented include the common stages of verbal aggression and effective strategies for dealing with the stages. The stages discussed, adapted from information from the Crisis Prevention Institute (1983), include anxiety, refusal, release, and tension reduction. Briefly described, a person in the anxiety stage often will ask information and challenging questions accompanied by voice changes, pacing, and other misdirected physical energy; a person in the defensive stage may become very noncompliant and begin to lose rational thought; a person in the release stage vents, screams, yells, or may become physically aggressive; a person in the tension reduction stage starts to relax, begins to gain control, and returns to normal activity.

Using videotapes prepared by the instructor of emotionally handicapped students in a verbal aggression crisis, the university students are taught to identify the various behaviors of the cycle. Of course, the instructor points out that in a verbal crisis, not all stages occur, nor do they necessarily follow this sequence, or demonstrate such distinction. Plus, it is hoped that proper intervention at the first stage will prevent the second from occurring.

Once the students feel familiar with the behaviors, effective strategies are discussed for each of the stages. The strategies include supportive, choice, bargaining, reality, direct firm command, broken record, timeout, reality therapy, and problem solving, and are adapted from the works of Glaser (1965), Redl (1966), and the Crisis Prevention Institute (1983) plus the instructor's experiences.

Using the supportive strategy, the teacher agrees with part of the criticism and offers help such as "Yes, I can see that may be difficult; let me help with the first problem." The teacher answers all of the information questions of the students, ignores the challenging, and redirects the student to the task at hand. In choice, the teacher gives the student a choice; that is, "Either continue to work or you will lose two points. It's your choice." Bargaining involves a tradeoff; that is, "You do three problems and then you can have free time." Reality is employed simply by alerting the student to the "real world" or consequences; that is, "You need to do these three problems if you want to pass the assignment." An example of a direct command often used by teachers of the emotionally handicapped is "Sit down." Taken from Lee Canter (1982), broken record is repeating a direct command three times and not allowing the student to sidetrack the issue; that is, "Get to work. I am worried about you, not Joey (in response to student's saying Joey is not working). Get to work."

Timeout strategies are varied, but basically involve ways to get students to a quiet, often secluded area in the classroom where the student is not allowed to participate in any activities. Reality therapy and active listening are both types of problem-solving strategies where the students identify their behaviors, their feelings, how the behaviors affect others, and appropriate alternative behaviors either in verbal discussion with the teacher or in written form.

Although the students are made aware that there is not a one-to-one correspondence between strategies and stages of aggression, the strategies are discussed according to the stages as outlined in Table 1. These strategies are not presented all at once but on different occasions; thus, on one night, the discussion dealing with verbal aggression may only involve presentation and practicing of the supportive strategy; the next session, the choice and bargaining, and so forth. The strategies are modeled by successful teachers of the emotionally handicapped via videotapes, again taped by the instructor. Nonverbal strategies such as voice control and body language are also taught at this time. Students are taught to try different techniques for relaxation such as

TABLE 1

Stages of Aggression and Suggested Strategies for Each

Stages	**Strategies**
Stage One	
Anxiety	Supportive
Stage Two	
Refusal	Choice Bargaining Reality Direct Firm Command Broken Record
Stage Three	
Release	Timeout Direct Firm Command
Stage Four	
Tension Reduction	Reality Therapy Active Listening

visualization of a pleasant experience or deep breathing. They are repeatedly instructed to listen to their voices to monitor if they sound calm with a smooth cadence. After a strategy is discussed and modeled, controlled practice activities are introduced.

Controlled Practice

The controlled practice activities consist of role-playing simulations. The students are divided into role-playing triads. One student is assigned the role of the teacher; one, the emotionally handicapped pupil; one, the observer. The student portraying the emotionally handicapped pupil is given the behavior to demonstrate and the task while the student portraying the teacher is assigned a particular strategy. For example, after the presentation of information concerning the first stage and strategies, the student role playing the emotionally handicapped pupil might be told to ask challenging questions, sound excited, and so forth (behaviors of the anxiety stage) and to build the behaviors around the statement, "Why do I have to do this stupid stuff? I did it all yesterday," during an independent math activity (task).

The student assigned the role of the teacher would be told to use the supportive strategy. The student assigned the observer role is given a check sheet with the appropriate teacher behaviors identified and told to mark what the teacher did (see Table 2). Research results show that identification of behaviors often is improved with the addition of a checklist (Glazard, 1977). It also assists in the feedback interaction at the end of the role playing and as described later in this article.

All triads participate in the role-playing simulation at the same time while the instructor roams from one group to another. At the end of the role-playing scenario, the observer shares the checklist with the student who portrayed the teacher of the emotionally handicapped. The observer then shares with the class one good thing the teacher did in dealing with the verbally aggressive behavior. The instructor also mentions any effective strategies observed during the role-playing session.

This same sequence is followed after discussion of each of the stages with the accompanying strategies. For example, the next simulations would direct the student to display behaviors from both the anxiety and refusal stages and direct the teacher to use strategies for both. The observer, in turn, would mark

TABLE 2

Role-Playing Checksheet for Nonverbal/Supportive Strategies

☐ 1. Kept calm
☐ 2. Spoke in low voice with slow or appropriate cadence
☐ 3. Spoke in firm voice
☐ 4. Restated what student said
☐ 5. Answered information questions
☐ 6. Ignored challenging questions
☐ 7. Was not judgmental concerning the student's questions
☐ 8. Questioned for specifics
☐ 9. Agreed with part of the criticism
☐ 10. Used other effective strategies such as ______________________
____

an expanded observation sheet to include strategies accompanying both the anxiety and refusal stages.

After all the stages and strategies have been practiced, less structured simulations occur in an effort to more realistically replicate the natural setting. The role-playing triad continues, but now the students are given more choices in their roles. Instead of telling the students exactly what to do, cards are prepared for the emotionally handicapped student and teacher roles. The student card describes the inappropriate behavior and also when to stop the behavior; for example, "go through the first two stages only" or "stop only if the teacher remembers to ignore your challenging questions." The teacher's card describes the classroom setting and management plan, for example, "The 11th grade emotionally handicapped student is enrolled in your 9 a.m. science period. The students are working on an independent activity when the episode occurs. No points are used in the class and the dean does not like referrals."

The observer still uses a checklist, but now the list is expanded to include all the strategies. The observer is also asked to identify any teacher behaviors that need improvement (see Table 3).

Independent Practice

As part of the independent practice activities, each student has to videotape one of the simulations with a peer and then self-evaluate her/his interaction using the Final Observation checksheet. Each student also has to evaluate the performance of two peers on the videotape by completing the same sheet. There is no cutoff score of acceptable performance, but an individual conference is held between each student and instructor noting some of the strengths and areas for improvement.

As a continuous independent practice activity, students are assigned to try to use each strategy once it has been role played in their daily lives. They are further required to write a description of the situation and their reaction in a journal in an attempt to internalize the behaviors. The journal entry is then

TABLE 3

Additional Items for the Final Observation Checksheet

10. Used the following:
    - ☐ a. Choice Strategy
    - ☐ b. Bargaining
    - ☐ c. Reality
    - ☐ d. Direct Firm Command
    - ☐ e. Broken Record
    - ☐ f. Timeout
11. Used one of the following when student was calm:
    - ☐ a. Active Listening
    - ☐ b. Reality Therapy
12. Other effective strategies ____________________
____
13. One good thing the teacher did: ____________________
____
14. One thing that needs to be improved: ____________________
____

shared voluntarily on a weekly basis. Some students try the strategies with emotionally handicapped children as they are junior student teaching while other students try it during their regular activities. For instance, one semester one of the students in the class was a waitress and had many opportunities to experiment with the strategies in dealing with a verbally aggressive public.

Generalization

The requirement of practicing the strategies in other situations besides the university class and compiling them in a journal was the first step in generalization used during the class. Often in the discussion, other techniques were suggested and many times the student would use them in the next similar encounter. In addition, all students are required to evaluate their handling of verbal aggression by marking the role playing final observation sheet at least ten times during their senior year student teaching experience. These sheets are turned into the college coordinator.

EVALUATION AND DISCUSSION

In an information survey soliciting student input concerning activities and requirements of the course, 27 of the 30 students marked that the practice activities, i.e., role-playing simulations, journals, and so forth should continue. One student felt the role-playing simulations should continue, but not the recordings. Two students felt the practice activities should be dropped. One student further added that she is now able to remain calm when her mother begins an argument.

In an analysis of the final observation forms turned in at the end of the senior teaching semester, most students marked that they used the strategies, especially the nonverbal strategies, with either the direct command or choice plus one of the problem solving strategies more than any of the others. The senior student teachers are also required to keep logs of their experiences. Many noted they became more comfortable with the strategies once the first episode of interacting with verbally aggressive behavior had occurred. One student commented that the strategies did not work because the teacher did not use much verbal interaction in the classroom. Another student found that the tension reduction strategies were too difficult to employ due to a lack of time.

The purpose of this article is to present an instructional model for the teaching of an essential skill for teachers of the emotionally handicapped population. The model is based on research conducted with elementary and secondary regular and exceptional students. It also contains components that have been identified as effective teaching practices for college students. The article addresses the first step of the model: the attempt to adapt it to a university class. The recent reports on higher education have commented on the need to develop different ways of presenting information other than the lecture method (Becker, 1987).

To quote from Arthur Chickering and Zelda Gamson in their report of good practices in undergraduate education made to the American Association for Higher Education and the Education Commission of the United States (1987):

> Learning is not a spectator sport. Students do not learn much just by sitting in classes, listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, practice it, write about it, relate it to past experiences, and apply

> it to their daily lives. They must make what they learn part of themselves. (p. 4)

This instructional model attempts to do just that. Students are involved, they practice the techniques, they write about them, and they try to apply them to their daily lives. The next step is to check the efficacy of this instructional model in a more systematic, empirical manner. Do students make what they learn part of themselves? Do they actually apply it or just say they do?

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